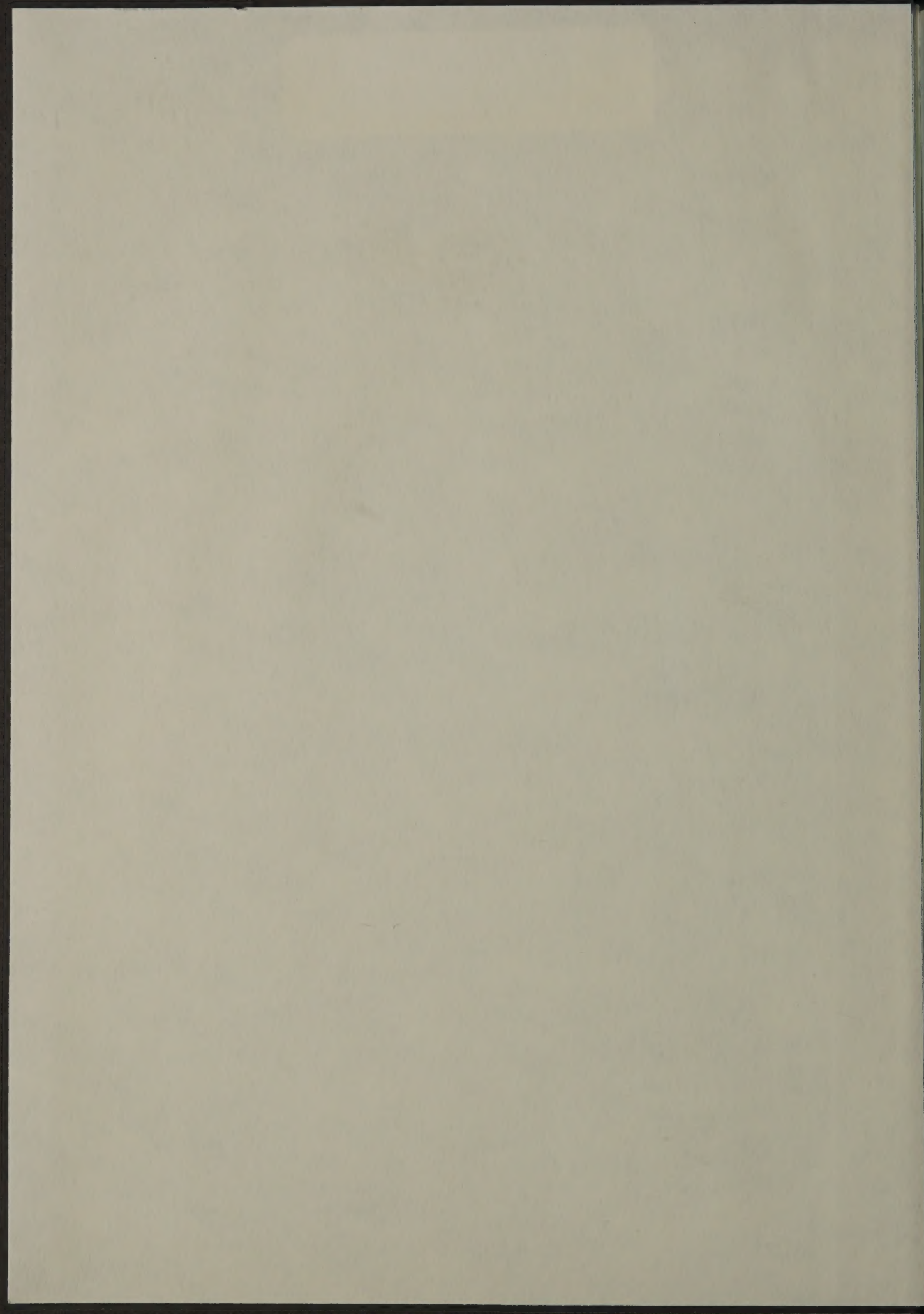


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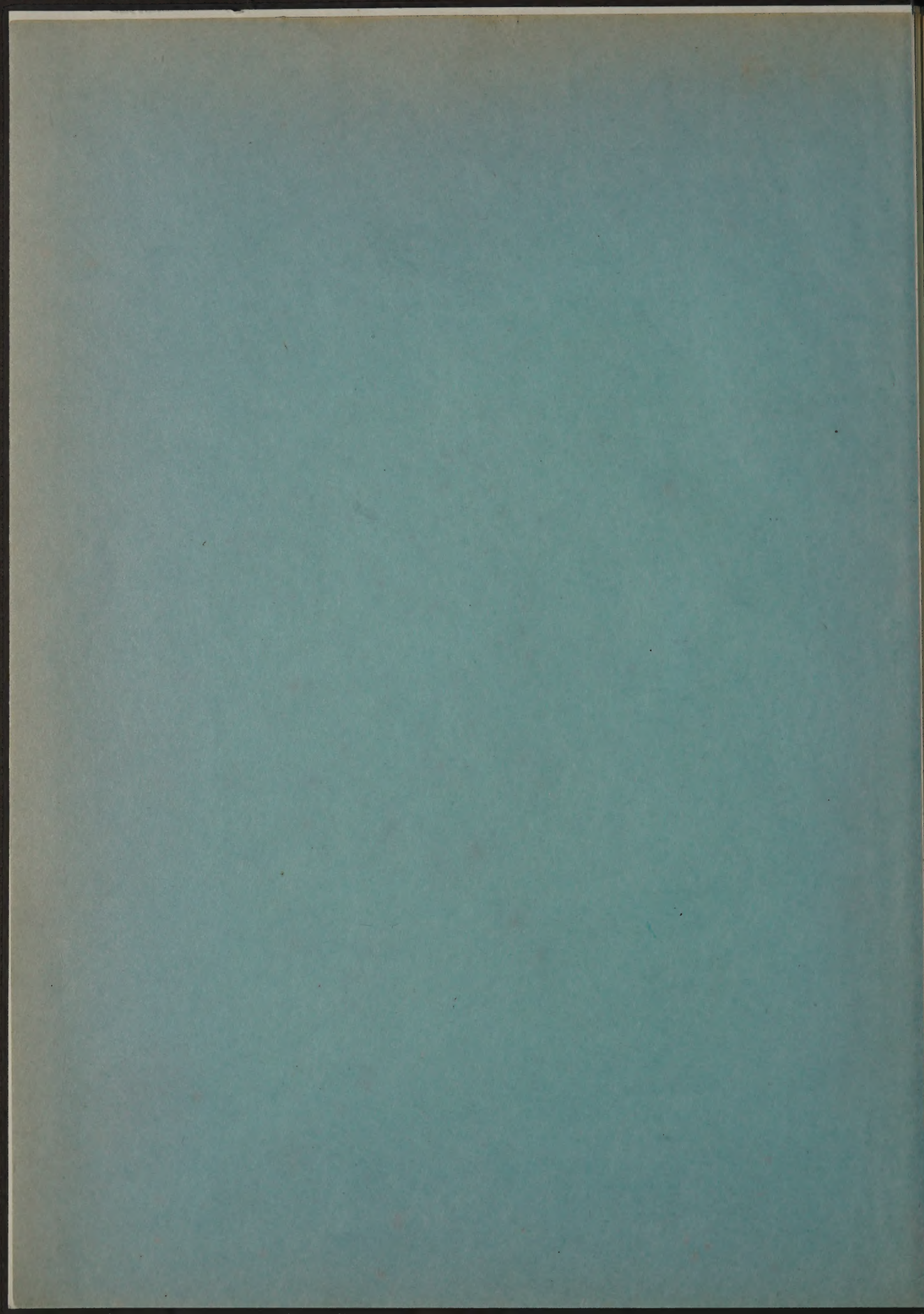


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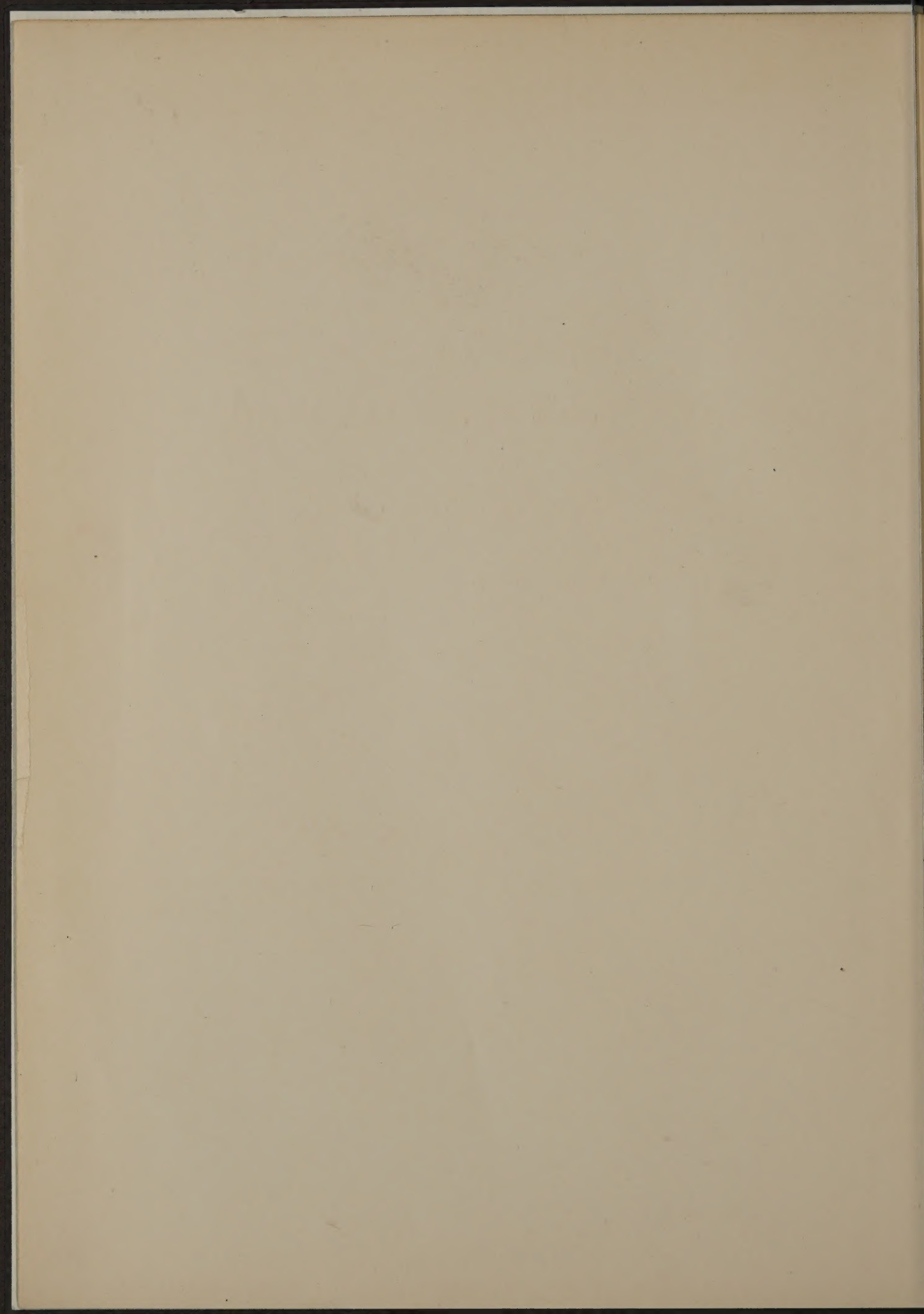


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HISTORY OF
NORTHWESTERN PENNSYLVANIA





(Photo by Walter Jack)

Boundary Monument at Southwest Corner of New York State

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HISTORY OF NORTHWESTERN PENNSYLVANIA

Comprising the Counties of

ERIE, CRAWFORD, MERCER, VENANGO,
WARREN, FOREST, CLARION, McKEAN, ELK,
JEFFERSON, CAMERON AND CLEARFIELD

By

JOSEPH RIESENMAN, JR.

*President of The Franklin Historical Society and
President of The Allegheny River Improvement Association*

VOLUME I

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FOREWORD



PENNSYLVANIA, "The Birthplace of the Nation," "The Cradle of Liberty," "The Garden Spot of the World" has the most glorious history of any of the states. In the past, capable historians have recorded the important and romantic early history of this great state, have told of its agricultural, commercial, industrial and cultural development, its vast natural resource reserves and have extolled its unsurpassed scenic splendor and its many great contributions to the establishment and the development of our great nation.

The author has had no thought of attempting to improve upon the fruits of the labors of former worthy historians, such as Donehoo, Godcharles, Sipe and others, but to cover events and matters pertinent to Northwestern Pennsylvania in greater detail than would be possible in a history of the state as a whole.

No part of the state of Pennsylvania is richer in history and accomplishment than is the northwestern section, which in Washington's time was the western outpost of the nation. No part of the state can excel its natural scenic splendor.

The early history of the Indian tribes, the conflicts between the French and the British, with their important bearing upon the great struggle which finally resulted in the birth of a new nation, dedicated to the principle that man has certain inherent rights which it is the duty and responsibility of government to protect and preserve, a nation destined to become the greatest in history, were largely centered here. Here was the West Point where Washington and most of his generals received their early military training. The city of Franklin has within the present corporate limits of the city the sites of four colonial forts.

Here was born the petroleum industry which has so greatly affected the lives of the people of this generation, the early history of which is rich in romance, adventure and tragedy. Here the early lumbering industry was important, as well as the iron industry; many of the old iron furnaces may still be seen. There is much of romantic and material interest associated with the great Allegheny River which, with its tributaries, including historic French Creek, supplies eighty per cent of the water that comprises the Ohio River and is a part of the nation's great inland waterway, the Mississippi system.

The author has endeavored with sincerity and fidelity to record truthfully the events and the facts associated with this section of

our state which have contributed to the founding and the development of our nation and of which the people of the nation have been the beneficiaries. We of Northwestern Pennsylvania shall ever strive to perpetuate the accomplishments of those who have, through their labors and sacrifices, left to us a glorious heritage.

The author acknowledges with deep appreciation the coöperation of those who responded to his requests for historical data, the assistance of the Advisory Council named below, and the aid in compilation of Edwin P. Conklin.

JOSEPH RIESENMAN, JR.

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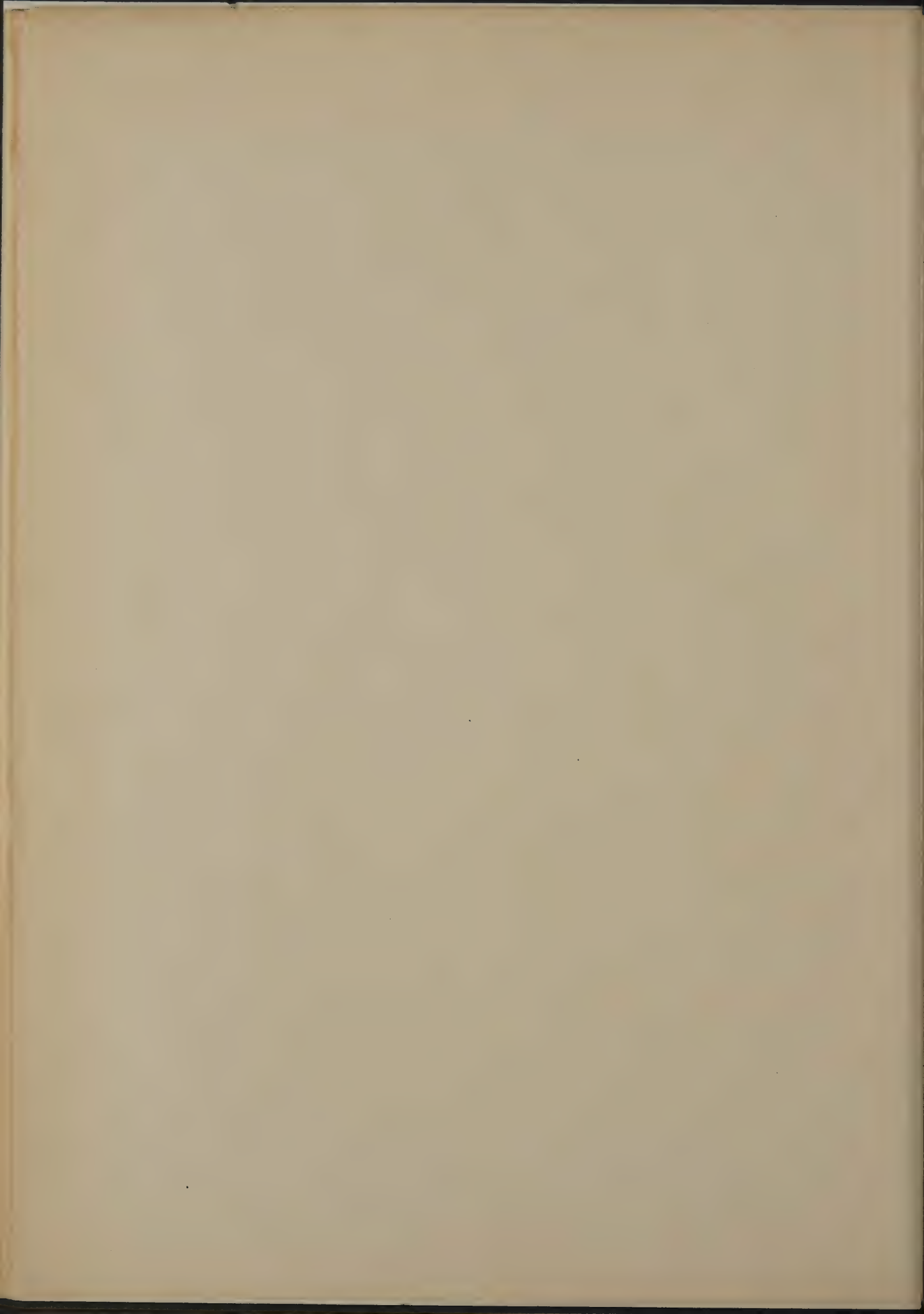
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CHAPTER I

Introduction

It is quite natural and to be expected that each person cherishes fond memories and entertains a feeling of pride in connection with his native habitat. It is also a fact that every nation and every section of each nation supplies something to which its people can justly point with pride and satisfaction. Just as all of the virtue, or the lack of it, is not confined to any one subdivision of society, so all of the worth while contributions to the world, all of the great leaders in the arts, sciences, industry and statesmanship and their accomplishments to the betterment of humanity have not been confined to any, or even to a few, of the nations or to sections of each nation. The most wonderful and the most perfect thing presented to man for his study is nature and a wise Providence has, through a wide distribution of natural resources, climatic conditions and many other factors, divided among His children the opportunities and the responsibilities of developing, for the use and benefit of man, the many gifts with which He has enriched the earth. Therefore, those who are most deserving of credit and praise are they who have, oft times, with great courage, patience and self-sacrifice, developed and made the best use of nature's gifts to man. We shall be remembered by what we have done for others not by what others have done for us. The works of the age of Pericles lie in unrecognized ruins; the wonders of the days of the Ptolemies are buried fifty feet beneath the level of today's ground; the coliseum at Rome is merely a spectacular ruin; but the golden thoughts of Homer, Cicero, Cæsar, Shakespeare, Milton, Johnson, Goldsmith, Longfellow and many others will live on for centuries.

Scientists tell us that the earth is more than fourteen hundred million years old and appear to prove it. They also say that men of one sort or another have lived on the earth about a million years. And what we term civilization is merely the infancy of the human race. The sun, losing by radiation less than one per cent. of its volume in 150 million years, will continue to heat and light the earth, enabling men to progress toward real civilization, for hundreds of millions of years

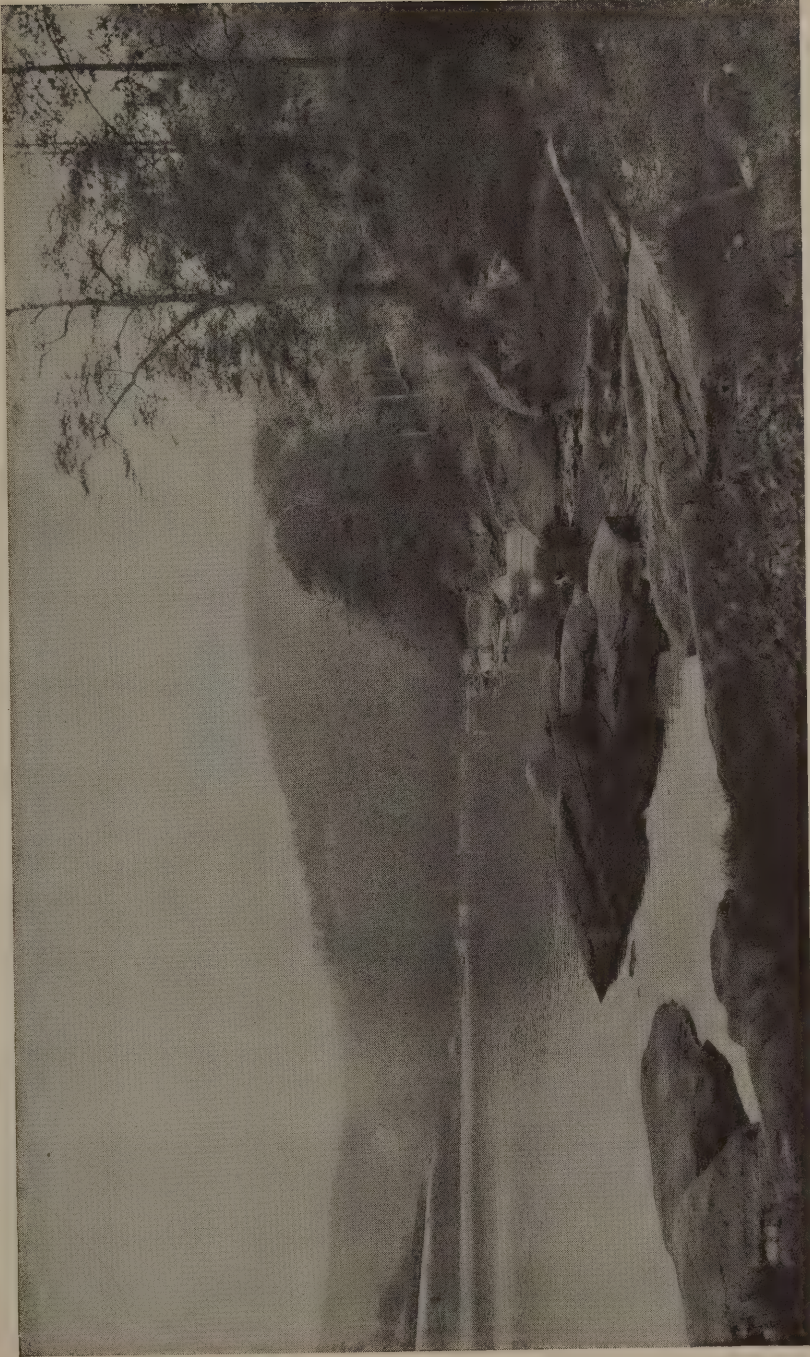
longer. We are only seventeen thousand years from the late Stone Age. In the lifetime of a planet, and of the human race, only a day separates our age from the late Stone Age. To see what we once were, and realize how far we have come in a few thousand years is encouraging. It helps us to believe that during the millions of years ahead, men will become really civilized and solve all their problems, including the problems of poverty, hatreds, racial and religious, war, disease, famine and the other problems of today.

We boast about how scientific we are and then, in our dealing with the problems of life, we fail to make careful application of the fundamental principles that Divine Providence has seen fit to employ in constructing that most perfect of all machines—the human body. No machine ever constructed is so efficient as man himself; as an organization the human body is unequalled; it is so flawless in its functioning under a wide variety of conditions that no great change has been made in it for thousands of years.

To this wonderful creature, the Author of all life gave gifts not bestowed upon any other, the gifts of reason, understanding and free will and then left him to work out his destiny. Unfortunately, man has not always made use of his talents wisely for his own good, or justly for the good of his fellow-creatures. Therefore, down through the centuries, there have been many periods when man has suffered greatly because of the failure of the strong and of those in authority to use their talents in accordance with the Divine plan.

The same source of intelligence, the same guiding power, the same Infinite cause, the same Divine Providence, who controls the universe, places on this earth, this tiny speck of cosmic matter whirling through limitless space, mortal man and takes him away. We wonder, we guess, we hope, we fear. It is all such a great mystery—something surpassing human comprehension, the contemplation of which confuses and confounds. We ask ourselves, what is it all about? What is the purpose of it all? What we call "Intelligence" makes us believe that there is a purpose in it all. We have *Faith* in the purposefulness of the universe.

The God who created man, the God who "moves in a mysterious way His wonders to perform," implanted in the soul of man a yearning for LIBERTY—liberty of mind, liberty of body, liberty of spirit, liberty of conscience, liberty of heart. In his quest for this liberty, man, since back in the dim centuries, when under the lash the Hebrews were being sold and enslaved to Egyptian masters, has endured sufferings, undergone persecutions, and made sacrifices that grip the heart and move



Allegheny River, Near Rockmere

the soul. In his efforts to realize his longing for liberty, nearly all of man's existence has been one of strife and struggle, battle and trouble, in which his soul has been tried almost beyond endurance. It seems as if it is a purifying process which, by the will of Providence, man has to undergo in the fulfillment of his destiny.

The tree of liberty has been a slow-growing, heart-rending, soul-trying plant, nurtured with the blood of men and watered with the tears of women. Since its seed was planted, it has grown through long and weary centuries of storm and sunshine, tempest and calm, sorrow and joy, disappointment and realization, before developing into a sizable tree under whose shade humanity might rest in peace and contentment.

For centuries man had known but one world, the old continents on which, shackled and confined, he had struggled and endured beyond belief. Then happened a great event—one of the greatest of all time: a new world, America, was discovered—a continent with gigantic forests, majestic mountains, vast prairies and beautiful valleys filled with fruits and game—a country with numberless lakes and streams abounding in fish of all kinds—a land sparsely inhabited by a primitive people, simple and romantic, children of nature, who, free from care, breathing the air of freedom, roamed unrestrained the valleys and the mountains, the forests and the prairies, of this big, broad wonderland of scenic splendor and majestic grandeur.

The heavy black cloud of a thousand years had come over the Old World. Moral and social darkness on all mankind rested so densely that no light penetrated. Then, in the West, across the Atlantic, a star was seen—twinkling, signaling—just as more than a thousand years before a star in the East had been seen. A ray of light had at last filtered through the darkness; night was going, day was coming. Gazing at this star—this star of hope—loosening and rending asunder the chains which for long and weary centuries had shackled his body, his mind, his heart, man began toward the beaconing light to wend his way. In time men from many lands, with hope in their hearts, came and settled in this virgin world, in quest of liberty and the happiness and contentment they hoped this liberty would bring them. There came the English, the sturdy Dutch, the hardy, tough-fibered Irish, the patient Germans, the resolute Swedes. These were the people—stout of heart, strong of faith, sturdy of conscience, determined of purpose, genuine of character, courageous of spirit—who laid the foundation on which was established the greatest government in the history of the world. With the arrival of the first settlers began the writing of the

greatest epic ever written—the enactment of the greatest drama ever enacted: the conquest of the wilderness, the making of a civilization, the creation of the American Nation.

Following a century and a half of struggle, suffering and sacrifice, marked by battling of disease and hunger, fighting wilderness and savage, meeting with courage disappointments and with constant faith, overcoming untold obstacles, man's longing for liberty was crystallized and given expression in the Declaration of Independence, the great creed of self-governed freemen, voicing for the first time in the history of humanity belief in the equality of man and faith in the people to govern themselves and through self-government realize man's yearning for a better, more bounteous, happier life. The signing of the Declaration of Independence was the great act of faith of all time. When on July 4, 1776, the Liberty Bell announced the proclamation of the Declaration of Independence, it represented the voices of millions of struggling and suffering men and women and children of the centuries before, joined together in one great chorus, proclaiming for the first time in the history of the world the birth of a nation dedicated to the personal and religious liberty of mankind.

Then, the means for transforming into a reality America's faith in the value and possibilities of the common man—the method for realizing this great ideal embodied in the Declaration of Independence—was provided for in that imperishable creation of our forefathers, the Constitution of the United States of America, "the most wonderful work ever struck off at a given time by the brain and purpose of man," as described by Gladstone, which established the American Republic as the instrument for the realization of the vision which would bring to the American people happiness and contentment.

In the following years, more people, millions of them, came from more countries, people of all lands, of all races, of all religions and America gave them all welcome. These human beings, these souls in bodies of different colors, these mortals of all races and all faiths, but all children of the one God created for the same eternal destiny, were brought together in the great laboratory of humanity and placed in the American melting pot, the world's most wonderful crucible, to be fused into one indivisible whole, and given self-government in the belief that they were capable of it and that it would bring them to a richer, fuller and happier life.

One who seriously studies the subject must be impressed with the thought that the selection of America as the scene of this great accomplishment in the promotion of human welfare and happiness was not

an accident. It was done by the guiding hand of a wise and kind Providence Who chose this wonderland, the vastness of whose plains, the magnitude of whose mountains, the majesty of whose rivers, the splendor of whose valleys, and the sublimity of whose scenic grandeur gave a setting in keeping with the vision, inspiration and greatness of the purpose to be attained. The guiding hand of Providence can be seen in many instances in the founding and the preservation of the Nation. In the life of the immortal Washington, many instances may be noted which appear to confirm this opinion and, in view of his heredity, environment and material possessions, and the natural selfishness of the human creature, it was remarkable that he was inspired to make the great sacrifices and to be able to render the service and give the wise counsel which played such an important part in the founding of the Nation. Then, ninety years later, when the union of the states was threatened, there appeared another man of destiny, the immortal Lincoln, who was to render a great service to the Nation.

Christopher Columbus, today recognized not alone as the great pioneer and mariner, the man of indomitable will and courage, but also as a scientist, a practical scientist, made many mistakes. In his mistakes there almost seemed to be destiny at work, for they were all fortunate mistakes. There was, for example, his calculation of the size of the earth. Columbus calculated the size of the earth as we do today upon the principle of a circle of 360 degrees. Now by simple measurement it has been learned that a degree upon the earth is about sixty-nine miles long, and thus the circumference of the earth at the equator is sixty-nine miles multiplied by 360.

Columbus calculated however, that a degree was fifty-six miles long, and thus believed that the earth was about one-sixth smaller than it really is. This incorrect estimate of his was his reason for believing that the continent and islands he discovered were a part of the far eastern end of Asia. That is why until the day he died, he continued to believe that he had found the fabulous Orient. That is probably why, too, he was able to make his voyage, a voyage which might have been delayed a century or more if Europeans had not accepted Columbus' mistake in calculating the size of the earth.

Pennsylvania, the "Birthplace of the Nation," the "Cradle of Liberty," had a most important part in the founding and in the preservation of our great Nation and, through the development of her natural resources, the contributions of her many men and women in all of the arts and sciences, the great courage and vision of the early pioneers who laid the foundation for later material accomplishments,

in genuine value to the Nation and to the human family, the contributions of Pennsylvania surpass those of any other State in the Nation.

And in the making of these contributions no part of the State deserves greater credit than the northwestern section. In Washington's time, this was the western outpost of the Nation; it might be termed the "West Point" of the period preceding the winning of independence, since it was here that Washington and his officers received their only military experience in the French and Indian wars.

During the eighteenth century, this section had many iron furnaces which played an important part in the foundation of the Commonwealth; many of these old time furnaces may be seen today and some of them in a very good state of preservation.

In the early days of the Nation, lumbering was a very important industry in this section while, at one time, the number of tanneries was greater than in any other district in the Nation. Hundreds of thousands of hides were shipped in to these tanneries, many of them buffalo hides from the western plains. New methods of making leather, new compositions for soles, wooden heels and such have been responsible for a decline in this industry.

Due to the remarkable vision and courage of Colonel Lewis Walker, who died January 24, 1938, the city of Meadville, Crawford County has had an industry which enabled that city to pass through the economic depression of 1929 practically unaffected and gave to the world a device of great practical merit. When this man visited the Columbian Exposition in Chicago in 1893, he came upon the invention from which his idea and his industry were to grow. It was one of those strange, yet happy, twists of fate that this invention should come under the eyes and into the hands of a man of spirited imagination, broad business experience, and unusual talents for combining and organizing men, materials and money. Without that happy chance, the invention might have gone to oblivion.

The creation of Whitcomb L. Judson, a versatile inventor, the first slide fastener was a crude device of dubious value. It required twenty years of experimentation and research in laboratories and engineering fields, with a great succession of disappointments and failures, before finally, in 1913, a satisfactory fastener, together with the precision machinery required to make it, was produced. Many discouragements were met with in the sales field. Those who had seen the older types of fasteners were suspicious of the new; those who had not, were equally skeptical. However, courage and persistent effort finally established the merit of the product and many millions of fasteners are now

annually marketed, while four thousand men and women, with an annual payroll of \$4,000,000, are employed in the industry.

The industries of this region are quite varied in character and many valuable contributions in the development and perfection of internal combustion and Diesel engines, air compressors, coal and snow loading machines, as well as many other of man's useful inventions have been made by the industries of northwestern Pennsylvania.

Although, perhaps, in this material world of ours, they may not be so well recognized, the greatest contributions made to human welfare are those which inspire the people to a practical exemplification of the higher virtues, and northwestern Pennsylvania has been endowed in the past with many men and women of faith, courage, sincerity of purpose and unselfishness whose contributions of this character have laid the foundation for a citizenship that has not only deserved the respect of the world but has resulted in many worth while and valuable material contributions to the progress of the human family.

Of these material contributions, the most important was the discovery of petroleum and the development of the petroleum and natural gas industries throughout the years following that historic event.

The Golden Fleece was no myth; the legend of the Golden Fleece describes an actual expedition made about 1200 B. C. to seize gold which was being laboriously washed out of river sands with the aid of sheepskins by the long-suffering people of Armenia. And in much the same manner the Indians of northwestern Pennsylvania before the birth of the Nation gathered "Black Gold" from the streams by the use of blankets and used it for medicinal purposes, never dreaming of it's great value to man to be discovered long after their presence on the stage of life.

Men have suffered, bled, fought, killed and died in their mad quest for gold and, if gold were to be discovered in some heretofore unknown region, the same drama would again be enacted. And still, except for a very limited use of gold in dental work and other materially useful and ornamental purposes, it has no value but that given to it by man as a medium of exchange.

However, when, in 1859, in Venango County, not far from the city of Titusville in Crawford County, Colonel Edwin L. Drake drilled the world's first successful oil well, there was made available one of nature's greatest gifts to man, the value of which had been predestined by a wise and beneficent Providence, and petroleum, with its more than two hundred by-products has, with the possible exception

of electricity, proved to be man's discovery of the greatest material value to humanity.

It is sad to contemplate the inhumane and destructive purposes to which foolish man has in recent decades diverted the products of petroleum, indicating a trend toward the decadence of our present civilization and the adoption of false philosophy on the part of a large part of the world. However, the constructive and useful purposes to which these many products have been put to use have accomplished much in genuine progress and in the conservation of human welfare and the comfort and happiness of man.

In chapters to follow, the interesting and romantic history of petroleum, its refining and processing and the development of the associated natural gas industry, as well as industry in general in northwestern Pennsylvania shall be related. Also the practical and scientific contributions in agriculture, the outstanding military history, religious, educational and cultural development and the unsurpassed scenic splendor of the region, often termed by world travelers the "Garden spot of the World," will be described.

Northwestern Pennsylvania forms a part of that portion of the earth which is commonly referred to as the "New World," implying that this country is newer than the rest of the earth. We know, of course, that God really created our part of the earth at the same time He created the remainder of the planet upon which it is our privilege to live and what is really meant by the expression "New World" is that it is assumed to be that portion of the earth more recently inhabited by mankind. Europe and Asia have been regarded as the birthplace of the human race and the part of the earth upon which man first appeared and where his first activities and development occurred. However, this theory has now been seriously questioned, as exploration has resulted in the uncovering of archæological remains which give evidence of the presence of human life upon this hemisphere which are asserted to date back to early as, or possibly even earlier than, those of the Eastern Hemisphere.

Who, or what, those first inhabitants were, and from where they came, or even those who followed the first ones and probably others down to the time of those whose remains and works may still be found in this region and throughout parts of western New York, the region of the "Western Reserve," and farther to the west is knowledge not as yet ascertained and will likely never be known to man in this life. But we do have evidence of a race of men who lived here before the advent of our "American Indian," and who were, in their time, quite



(Photo by Walter Jack)

The Old Fort Site, Waterford

numerous and remarkably industrious; and were, or at least became native to this region. The evidences of the life and activities of this people are characteristic, unusually enduring and exceedingly numerous. Some of their monuments compare with those of the Pharaohs of Egypt in size and proportions, while the estimated age of some of them also compares favorably with the antiquity of the most ancient monuments produced by man in Europe and Asia. Their character and contents have enabled explorers to determine much as to the domestic, religious and commercial customs of that people. However, much is written upon and within those memorials which is as yet wholly enigmatical to most of our investigators. So much for that page of nature which deals with our human predecessors. But besides this, nature has written largely and deeply as to the structure of the region, and of the changes which have come to it in the ages which probably preceded human occupancy, and of those which transpired during human life within this territory.

A number of unusual mounds and embankments found in Erie County by the early settlers and which later yielded strange remains of a long since past human life, raised many conjectures as to the identity of the people whose remains have reposed for so long a time within those earthen structures.

The discovery and exploitation of similar works in Ohio, Indiana, Illinois, Iowa, Wisconsin and Minnesota, as well as a few in western New York, caused archæologists and ethnologists to commence the study of the evidence thus brought to light, with the result that it is now well admitted that this region was a portion of a large territory densely populated with a wonderful people, who must have advanced a considerable way in the arts of community welfare, and were certainly industrious to a degree, as shown by the numerous and great works which they have left to survive them, and which could never have been constructed by a primitive people without the expenditure of immense labor and toil.

As history is but recent, comparatively speaking, and covers only that of which we have written records, or such as was written down from well established traditions of unquestioned authenticity it must needs follow that the race of men which built the great earthworks of this region must have been a prehistoric race of men; for there is nothing left for their record but what may be interpreted from their works, their graves, and a few utensils, ornaments and tools. Nothing whatever appears as a written or traditional memorial of their existence.

China, Greece, Rome and Egypt claim very great antiquity for their historical records. Thousands of years are claimed, and are shown by well attested records, for their existence. Yet right here in this region, in association with Ohio and other places, appear unquestioned records of a physical character, of a people whose existence here may be measured in terms of tens of thousands of years, perhaps longer. In any event, it must be conceded that human life within this very region of ours must have been a live and throbbing activity which invested the whole territory with an active community purpose even during those periods when history affirms the Eastern Hemisphere was teeming with humans. It is not at all unlikely that this hemisphere may have been the cradle of the race, rather than the eastern one; and that, mayhap, humanity strayed away from here and into Asia as the manner in which men came to be dispersed throughout the earth. However it may have been, research has made certain that America saw human endeavor and human struggling against the terrors and tragedies of a fearful wilderness thousands of years ago; and that men found a way to protect themselves and their loved ones from the onslaughts of wild beasts the like of which we have never beheld, and which it is difficult for us to even comprehend; and managed to live, and to increase in numbers, and to do their part in exterminating the savage creatures which menaced their safety and their lives. But this all occurred long ages before history took up the work of passing down to later generations the story of what mankind was doing upon the earth. And to this day mankind retain very much of the instincts, the primal passions, even the instinctive and latent fears, which must have dominated them in those distant times, and which we have inherited from them along with our physical frames and natures.

Our land has various historic, and prehistoric ages, as well as do the other lands upon the earth. We have the Paleolithic, or Stone Age, the very earliest period of human development, well established for our country. It therefore follows, and is also well substantiated by the evidences, that the Neolithic, or later Stone Age, had a place in human development upon this continent.

And first as to the Paleolithic Age here, that is the beginnings of improvement by humans in their methods of seeking food, and of protecting themselves from the savage beasts by whom they were surrounded.

To Dr. C. C. Abbott, as much as, or more than, to any other person, is due the establishment of the fact that a Paleolithic Age occurred in this country. His discoveries of many rude and primitive objects in

the gravel beds near Trenton, New Jersey, were the first steps towards the proof. These relics seem to have been left by prehistoric peoples by the side of the ancient rivers, and in the loops of the great moraines of the ancient ice-sheet. They very strongly resemble the paleolithic remains found in Europe, and have been found also at Loveland, Ohio; Newcomerstown, Ohio and Medora, Indiana. Other such relics were later discovered near River Falls, Minnesota, by Francis E. Babbit, and by other persons at various places since.

It is well known that in those ancient times the northern part of this continent was covered with a great sheet of ice, which slowly, very slowly, moved southward over the land, grinding the hills smoother, and filling in the low places, as it went; and as it moved along, gathered up great rocks and soil which lay in its course, carried them with it great distances, ground the stones and polished off their surfaces, until a convenient place to deposit them was found. This great sheet of ice covering moved south until the genial warmth of southern latitudes melted it; and there it deposited much of the soil, smoothed stones, boulders and rocks which it had picked up farther north and which still remain through the land, and all over this region, silent reminders of the period when our region was at the very edge of this ice flow. The large smooth boulders found in our fields are entirely unlike any rock strata to be found anywhere near here; and have come here from their native beds hundreds of miles north, where they were wrenched from the ledges and slowly carried in the bosom of the ice sheet until released by the sunshine of our temperate region. In our generation, a somewhat similar happening has occurred; due to the denuding of our forests, erosion has carried away and deposited into our streams vast quantities of rich top soil and, in recent times, efforts have been put forth to overcome this serious situation through reforestation and by strip-farming on our slopes. The ancient deposits of foreign earth and rock occur in a fairly uniform line across the land, and constitute what is geologically termed the "Terminal Moraine," or the line of rocks and gravel at the edges and base of glaciers. Farther north, much evidence is present of the passage of the great glacier in those distant times. Evidence is also present to show us that this ancient glacial sea did not just cease at once; but that the influence of the warm air gradually sought it out, and little by little made thawing inroads upon it, driving the line of the terminal moraine farther and farther north, leaving evidences of this retreat over all the land.

It is along ancient edges of this terminal moraine that the relics have been found of ancient paleolithic mankind. These relics have

been found in close association with the edge of the great ice sheet. It is therefore certain that man existed here even in the ice age. These relics are rude stone weapons and implements, little more than slightly modified forms of pieces of rock which they casually picked up and sought to form in more convenient shape for their uses. But they prove to us that man existed at that date here in this land, and belonged to its Paleolithic Age. These relics found in widely separated places, prove to us that mankind was present in very many places on this continent in that early day.

Some of those relics consist of rude axes, some of which seem to have had a rude groove as if intended for attaching a handle to them. Others are the well-known flint and argillite arrow and spear heads. When covered with a peculiar sort of gloss when found, which is called the patina, and perhaps having dendrites upon their surfaces, assurance is had of their extreme age. Many of those found in this country have shown these evidences, as have those discovered in Europe.

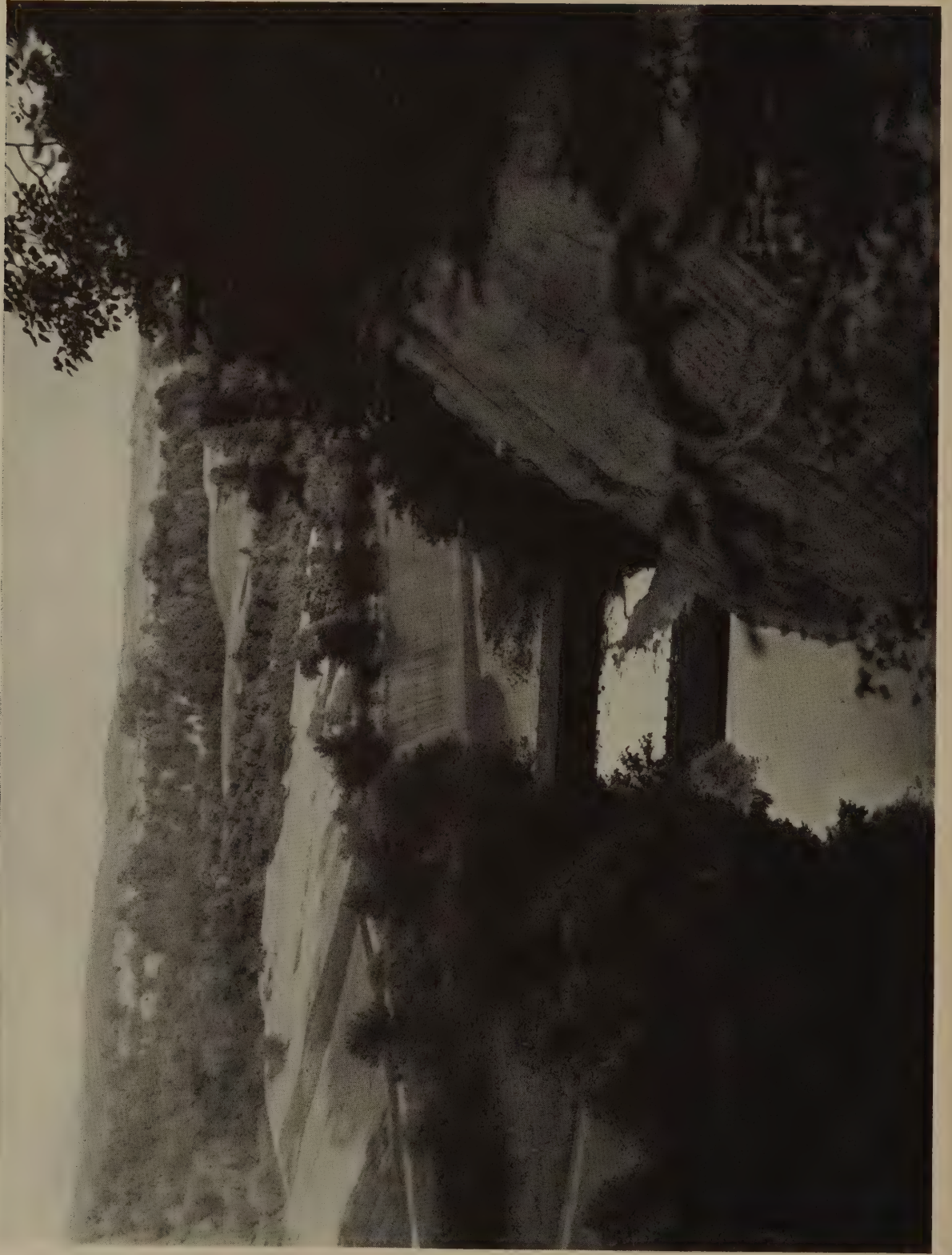
The Neolithic Age in this country is evidenced by improved utensils, implements and weapons. These consist of such articles as steatite pots, mortars and ollas, some of which have been found on or near the surface, and others at great depths in association with lava beds, and where vertical erosions in the earth's crust have taken place to the extent in some instances of hundreds of feet. Human skulls have been found in association with the bones of the mastodon, the elephant, and other smaller animals. Full credence is now given to the theory that man existed on this continent before the glacial periods, and science describes him as "short of stature and strong of limb." "His head was long in proportion to its breadth, his under jaw was square and heavy, his chin sloped backward and he had a retreating forehead." "His skull was small in front and large behind."

Whoever was the Paleolithic man, or even the Neolithic individual, we have sure evidence of a type of beings upon this continent at a later period, whose works are sufficiently numerous to afford us proof that they had advanced a long way from the earlier type of mankind. In South America various deposits of human bones have been found mixed in with the bones and skeletons of mammals, some of which are still extant, while many others are extinct, tending to show that those were the remains of a race of paleolithic humans; while the remains of the cave-dwellers of this continent have never been found intermixed with the bones of extinct animals, as the remains of cave-dwellers in Europe have been, or as the remains dug up in South

America have been shown to be. In California have been found kitchen middens associated with shelter caves; while at Chickies, Pennsylvania, a shelter cave was found which contained many rude stone relics and human remains. Other shelter caves have been described by M. C. Read and by C. C. Baldwin at Elyria, and at Newbury, in Ohio, which contained many bone relics such as awls, needles, chisels, and other rude articles, more like those used by a later race of beings. "Col. Charles Whittelsey held that there were three races in Ohio, the first being the Mound-builders, the second being the Cave-dwellers, the third being the Indians; but Prof. Read held that there was a race preceding the Mound-builders, a race whose skulls were thick and of a low type." ("Prehistoric America," by Dr. Peet.) Evidences of the presence of Cave-dwellers in the Mound-builder's territory is plentiful, comprising some in Tennessee where mummies were found, the result of the bodies having become impregnated with salt; some of these had been covered with feather head dresses and feathered robes resembling those used by later races.

In both east and west, as well as throughout the central portions of our land, are found kitchen middens, or shell heaps, which evidently belong, some to a very early period, some to a middle period, and still others to a fairly recent period of human life. These consist of shells and flints which are the remains of the shell fish used by men for food, and some of the weapons and implements dropped amongst the shells. In some of these great shell heaps may be seen "hut rings" deeply imbedded in the layers of shells, showing that the heaps had been accumulated over very long periods of time.

Other evidences of the antiquity of man's sojourn here may be found in the so-called "Period of the Mammoth and the Mastodon," both of which animals have been long since extinct. It is highly probable, however, that the Mound-builders were familiar with these animals, as it is believed that they lived in the same period. A most interesting "find" was made by Dr. Koch in the bottom lands of the Bourbouse River, Gasconade County, Missouri, where he discovered the remains of a mastodon. Apparently the animal had become mired in the mud of the marshes, and being unable to extricate itself, had finally been overcome by exhaustion and fallen upon its side. The beast had evidently then been attacked by the natives with almost every kind of weapon to which they could lay their hands; for arrows, stones, and pieces of rock, some fragments weighing as much as twenty-five pounds, were found about the carcass, evidently having



(Photo by Walter Jack)

been cast at the beast as it struggled in the mud. The natives had lighted great fires around the beast; for some of the heaps of cinders still remain, and are five to six feet in height. The following year the same man discovered the remains of another mastodon in Brinton County, Missouri, and under its thigh bone was found an arrow made of pink quartz, and near by were four other arrows, all of which had been flung at the stranded beast.

These arrows belong properly to the Neolithic Age rather than to the more ancient period; while it has been thought that the mammoth and the mastodon became extinct prior to that time. The problem therefore is not without its perplexities. In Iowa, Nebraska and in Ohio, have been found remains of these animals by other explorers, in each instance being mixed with ashes, traces of fire, and with stone weapons and arrow-heads strewn about as if lodged there during an attack by the natives upon the beasts. It is believed that the mammoth and the mastodon flourished before the glacial period, and that the convulsions and physical changes which marked the close of that epoch spelled the finish of those great animals. It is therefore concluded that mankind must have existed here prior to the great glacial age, because of the finding of his remains intermingled with those of the ancient and extinct beasts; which gives man an antiquity on this continent of at least ten thousand years, if geologists read the story aright for us.

Thus much for the Paleolithic and the Neolithic ages of mankind here. Now what can we say for those who apparently came next after those ancient dwellers in the land? And again we must turn to the story as it is found written in the works which mankind constructed in that period, and which have as yet not perished from the earth.

It is well known that a peculiar people, usually styled "The Mysterious People," once inhabited the interior portions of North America, including Tennessee, Ohio, western Pennsylvania and New York. Where these people came from, who and what they were, and last, but far from least, what finally became of them, is yet, and is likely to long remain one of the great, unsolved mysteries of the world. It is likely to rival the age old inquiry as to the fate of "The Lost Ten Tribes." All that we are likely to know about these people is from what we can learn from the great earthen banks, mounds, hut rings, game drives, temple mounds, observatory mounds, burial mounds, forts and other forms of construction. These are sufficiently numerous and largely well preserved as to afford us plenty of food for contemplation and reflection. Many of the "works" of this mysterious

people are found widely scattered but by far the most numerous are to be found in the Mississippi River basin, and up the valleys of its tributaries. It is conjectured that these people utilized those great water ways as highways of communication and that they confined their activities to a territory on either side of those great streams within convenient distance for ready communication. The works which are found within this central portion of our land are distinctive of this people; for while east of the Allegheny Mountains may be found enclosures, and in the far west there are rock fortresses, stone structures and pueblos, nowhere else can be found such vast number of them, and such great variety of purpose, so massive, solid, and of such peculiar forms. In these particulars these works are certainly characteristic, and identify these as a distinctive people; and wherever, within their territory, a structure may have been erected by some later race of men, it may readily be noted as such because of the absence of the qualities which mark those erected by the Mound-builders. Dr. Peet presents a descriptive account of the habitat of those people which is well worth reproducing here. He says, "We take the picture presented by this valley and find it strikingly adapted to the use of a class of people who were partially civilized. On either side are the high mountains, constituting barriers to their great domain. At the foot of the western mountains are the plateaus or table-lands, which have formed from time immemorial the feeding places for the great herds of buffaloes. In the northern portion of the valley, bordering upon the chain of the Great Lakes, are great forests abounding in wild animals of all kinds, which must have been the hunting grounds of this obscure people. The center was traversed by the Appalachian Range, which was fit abode for a military class of people. Along the lines of the great streams were the many terraces, forming sites upon which the people could build their villages, and yet have access to the waters which flowed at their base. Many of these terraces were formed by the gravel beds left by the great glacial sea which once rested upon the northern portion of the valley. Below the terraces, and all along the borders of the rivers, were the rich alluvial bottom lands which so favored the cultivation of maize and yielded rich return to a slight amount of labor. Broad prairies interspersed with forests and groves, and traversed with numberless streams gave variety to the scene. It was a region built on a grand scale and was capable of supporting a numerous and industrious population. We may suppose that the Mound-builders when they entered it were influenced by their surroundings and that they soon learned its re-

sources. We cannot look upon them as merely hunters or wild savages but a people who were capable of filling this broad domain with a life peculiar to themselves, and yet were correlated to the scene in which they were placed. Here, with a diversity of climate and an abundance of products, the people led a varied life. They were to gain their subsistence from the great forests and from the wide prairies, and were to fill them with their activities. A river system which, for thousands of miles, drained the interior, furnished the channels for communication, and was evidently well understood by this people. A vast sedimentary basin, through which the rivers have worn deep channels, leaving table-lands, cut by a thousand ravines, and presenting bluffs, head-lands, high hills, narrow isthmuses, detached, island-like cliffs, in some cases difficult of access, furnished many places on which this people could build their defenses, covering them with complicated works resembling the citadels of the Old World, beneath which they could place their villages and dwell in safety."

These great earth works may be briefly described as follows. Both the number and the greatness of these works challenge our amazement. Many thousands of the burial mounds and some 1,500 enclosures, have been discovered in Ohio alone. One embankment extends for a distance of twenty miles. Some of the earthen walls are thirty feet high, and encircle a space of from fifty to four hundred acres for their fortifications. Pyramids one hundred feet high which cover a plot of sixteen acres are found, and these divided sometimes into wide terraces three hundred feet long and fifty feet wide, were used to build their great houses upon. Other great mounds were used as lookout stations, and were fifty, sixty and even one hundred feet in height. In some parts of their territory they had constructed great game drives into which the hunted game was driven, and where it could be retained until wanted. These consisted of earth banks thrown up in great encircling lines, from which extended other earth banks, usually in straight lines on either side of a narrow space which formed a lane as it were, connecting with guiding banks which reached out still farther to guide the game towards the central enclosure, or pound. In some places were hundreds of acres laid out in curious patterns as garden beds; other works were in the forms of circles, some of which were used as fort-rings, hut-rings, village-circles, dance-circles, lodge-circles, and all being more or less interspersed with mounds adapted, some to worship and religious rites, others to lookout stations, building sites for their great houses, burial places, and other purposes; while other mounds were in the form of great and small pyramids, some of which

were terraced in peculiar manners; still others were effigy mounds, constructed in the forms of elephants, bears, elk and moose depicted as feeding; panthers and wolves fighting; wild ducks, geese, hawks, eagles, swallows and pigeons as flying; foxes, squirrels, raccoons, as running; fish and turtles as swimming; lizards, snakes, eels, and tadpoles as crawling; and all so arranged and placed as to be appropriate to their various surroundings. They portray a most vivid picture of the animal and bird life of the region as it then existed. But these mounds are found almost exclusively in the region west of Lake Michigan and east of the Mississippi. And still further it must be observed that very few, if any, animals of any other region are found among these effigies. The game-drives are largely to be found in and near by Wisconsin. The district within which are found the greater number of burial-mounds is that large territory comprising the present states of Indiana, Illinois (especially the northern portion), all of Minnesota, Dakota and Iowa, parts of Kansas and Missouri. Within these burial-mounds have been found the remains of the dead, and with them a great variety of relics such as pipes in the forms of beavers, otters, lizards, prairie-dogs, raccoons, panthers, prairie-chickens, frogs, and other small animals, a few being in the forms of the mammoth, the mastodon or the elephant. Many spear-heads, arrow-heads, knives, needles, awls, axes or celts, and sometimes fabrics of some material which had been woven and may have been used in the clothing of the people, have also been found within these burial-mounds. Another, or third, region occupied by them contains the more war-like works, such as military and defensive constructions. This region is embraced within western New York, Pennsylvania, and West Virginia. The region along the south shore of Lake Erie, and west into Michigan, is within this section.

A fourth region, located in the valley of the Ohio, may be termed the region of "Village Enclosures," or as sometimes termed "Sacred Enclosures." This region was apparently devoted to the more peaceful pursuits of agriculture, and the earth constructions are in the forms of the square and two circles adjoined. These village-enclosures were usually situated upon the wide second terraces, from whence a clear view of the great, rich bottom lands could be had; while upon the hills near by were constructed the conical mounds, evidently used as lookout stations. Many forts of ancient construction, placed where they could be used for military stations or as places of convenient refuge, are to be found distributed throughout this region. In addition to those works there are also, within this region, enclosures which

surround groups of burial mounds. These burial mounds often contain altars whereon were deposited great quantities of costly offerings, such as mica plates, arrow-heads, carved pipes, articles made from pearl, and many prized personal ornaments. In this same territory are a number of pyramids of truncated form, with ways graded up to the summit platforms, which have come to be denominated "temple mounds," in the belief that they had been used as places for assemblages for religious ceremonies. Within one such enclosure are three such platform pyramids, and from the enclosure down to the edge of the water extends two high banks with a graded roadway between them sloping upwards into the enclosure, and with a high lookout mound surrounded by a circle having a ditch within the circle, at one end of this group.

Another region, along the Atlantic Coast, wherein the mounds are conical, within circular enclosures, are found in the Kanawha Valley; the very interesting "grave-pits" which contain stone cists shaped similar to beehives of the olden time, are found in North Carolina. Innumerable shell-mounds are found throughout the southern portion of the Atlantic Coast district, and some of the conical mounds in this district appear to have been the foundations of rotundas, posts having been found set in them. A peculiar construction is found south of the Ohio River, between it and the Cumberland and Tennessee rivers, where the country is quite mountainous, and the ancient people might with propriety be called the Mountain Mound-builders. Their works consist of fortified erections, but with this significant difference from those farther north, that they appear to have been both fortification and village enclosures, as they provided for the means of defense and also for permanent residences within the same enclosures. Those north of the Ohio are sometimes double, and sometimes even triple enclosures; while these south of the Ohio are always single. These latter are in situations well chosen for defensive purposes, but within them are to be found burial, domiciliary and pyramidal mounds, thus indicating that they were used also as places of permanent residence, and very evidently for long periods of time. Here also are found the stone graves which are characteristic of this region, although they are to be observed in other localities as well. Another characteristic region is one located adjoining this last, where the lands are uniformly low and swampy, with sandy ridges interspersed; and where the waters often overflow the country. It might be called the region of Lodge Circles, as these are peculiarly plenty in this region. Here, too, are found large quantities of pottery,

showing that those who dwelt here were largely engaged in the making of it. This pottery resembles that found in the stone graves near the great Cahokia Mound in the vicinity of St. Louis, and is practically conceded to have been made by Natchez Indian tribes who formerly inhabited that section. The Chickasaws and Choctaws also dwelt in that region, and may have had a part in its making.

All of this leaves the original query as to who and what these ancient peoples who preceded the time of the native Indians on this continent were. We have been as yet unable to identify either their origin, or their fate. Neither is it at all determined as to where they came from, if indeed they did not have their origin here. But it is possible that during the ages since man became a native of this planet, that many, many types and races of people have lived in this land, one type succeeding another in almost endless variety, and race after race succumbing in its turn through military defeat, epidemics, absorption into other peoples, or otherwise, until we had the final successors in the Indians who gave way to the advent of our own white race.

From what has been learned of the so-called Mound-builders, we believe that there must have been many epochs during which they persisted here. We are also assured from the works and relics remaining of them, that there must have been many classes or types of them, some existing in one locality, others in other places, within the country. Then, too, there seems to have been different types of them in successive epochs or ages; so that the Mound-builders cannot be considered as being a distinct and single type of people, but the name is used by scholars to apply to those peoples, of whatever character, who lived within our country, especially the middle, northern and eastern portions of it, during the interval of time when earth works were constructed and used. This interval of time is properly called "The Mound Builders' Age," and it bears just as distinctive features as did the Paleolithic Age, or the Neolithic Age, each of which had its period in this land, and also including our own region. The definitive limits for each of these three various ages, cannot, of course, be certainly determined as yet. Just how many thousands or hundreds of years were covered by either, or each, of them is unknown; likewise the year with which each, or either of them opened, or closed, is as yet wholly unknown to us; but it is considered certain that each one of those ages consumed long periods of time during which humanity must have made scarcely perceptible progress towards enlightenment and advanced ways of living.



Sunset View of Lake Erie from Freeport

(Photo by Walter Jack)

The Paleolithic Age in this country is of course marked by relics of the most crude and primitive type, showing little or no effort on the part of prehistoric man to shape or improve the stones which he picked up. It is also typified by the remains and relics of man found in conjunction with the remains of certain extinct animals, the megatherium, then the mastodon, and later the remains of the now almost extinct buffalo, are typical of the Paleolithic, then the Neolithic, and later Mound-building, ages. But it is also true that there is no finely drawn line separating the various ages; but each age ran into its succeeding period; and each succeeding period had birth within the period which preceded it. Each age had need of a period of development, in order to achieve its characteristic type. And we must consider that the Mound-builders' Age is really identified with the Neolithic Age, or at least with the latter portion of that period.

It is believed that the Mound-builders were familiar with, used and somewhat developed "the copper mines of Lake Superior; the salt mines of Illinois and Kentucky; the garden beds of Michigan; the pipe-stone quarries of Minnesota; the extensive potteries of Missouri; the stone graves of Illinois; the work-shops, the stone cairns, the stone walls, the ancient roadways, and the old walled towns of Georgia; the hut-rings of Arkansas; the shelter-caves of Tennessee and Ohio; the mica mines of South Carolina; the quarries in Flint Ridge in Ohio; the ancient hearths of Ohio; the bone beds and alabaster caves in Indiana; the shell-heaps of Florida; oil wells and ancient mines, and the rock inscriptions which are scattered over the territory everywhere. We ascribe all of these to the Mound-builders and conclude that they were worked by this people, for the relics from the mines and quarries are found in the mounds." Besides these things found in those earth works, are also found later deposits obviously placed by later (aborigines) races within the works which those same races found already constructed.

In Erie County we have numerous reminders of this old, prehistoric race of humans; or at least numerous such relics have been found here and a very few remaining ones are still to be seen.

A circular embankment in Wayne Township, west of Corry, surrounds about three acres of ground, and is still apparent. Surrounding this embankment was a trench. This embankment, while still visible, is much reduced in height from what it was when the first settlers came into that county. When discovered it was much higher, and covered by huge forest trees. It is now little more than two feet high. A few rods to the west of it, used to be another circle, a trifle smaller

than the first one; but no care has been taken of it and the people owning the premises have heedlessly plowed and cultivated over and through it until it is practically obliterated.

Another was the one on what was years ago the John Pomeroy farm west of Cranesville. It had a double enclosure upon which great forest trees of oak and other varieties were growing in the early part of the nineteenth century. The remains of a fire were found within it about eighteen inches or so below the surface; while arrow-heads, a huge skeleton, celts, and many other such like relics were found scattered about. On the opposite bank of the nearby creek, Conneaut, was formerly another of similar character and appearance, and enclosing the same area. Could these have been the forts of two opposing forces, and this the scene of a desperate conflict in those far away days, or were these two enclosures the defensive works of a community of those Mound-building people? We shall perhaps never know. A large mound is located upon this same farm. It is about one hundred feet long by fifty feet in width and twenty-five feet high. Extravagant stories of mammoth human skeletons having been excavated here have been told. A few years ago there was to be seen remnants of a large circular enclosure near the village of Avonia. Also the remains of an old fortification of this character between Girard and Springfield. It is said that a human thigh bone was taken from a grave near by it which measured the incredible size of four inches longer than that of a man present who stood six feet two inches in height. All about the neighborhood where is located "The Devil's Back Bone," have been found numberless arrow-heads, pipes, pestles for pounding corn in their mortars, and other relics. A large cache of more than fifty arrow-heads and stone axes was uncovered near a farm owned by Colonel E. P. Gould in Springfield Township. This was just below the surface in the public road. Near the mouth of Walnut Creek was a large mound which was opened many years ago, but a few fragments of human remains was all that rewarded the searchers. But many relics such as arrow-heads, celts, axes, and the like had been picked up in that immediate vicinity. On the line of the P. & E. R. R., just beyond Warfeltown, in Erie, there was a famous place for school children, and others, to search for skulls and other human remains. Many burial mounds were to be then found thereabouts, which when disturbed yielded many a treasure as a reward for efforts of the searchers. It is said a very large human skeleton was found there, and with it two copper bowls which had been perforated around their edges and held together with a buckskin thong laced in

and out of these perforations. The bowls held about a pint of beads each; but what has become of either bowls or beads, we have been unable to learn. Some years ago, on the farm of Judge Sterrett, just south of Wesleyville, were found several human skeletons in a sitting posture facing the east. Numerous drinking vessels were found accompanying them. Other graves in the vicinity had similar contents, all facing the east. A large mound near the New York Central Railroad tracks in North East Township, about three miles east of the borough of North East, was opened many years ago by Dr. Heard, a prominent physician and surgeon of that place, and several skeletons uncovered, all with the feet pointed towards the center as in the spokes of a wheel. A number of stone relics were found, all of which the doctor packed up and sent to an eastern medical school, we believe the University of Pennsylvania at Philadelphia. Another small mound was opened a few years ago in McKean Township which yielded a skeleton. But in all of these cases the opening was done without any scientific object in view, and no accurate measurements or scientific data were preserved.

A most singular find was once made by Francis Carnahan while plowing a field in Harborcreek Township in 1825. It was a strange looking bead, which he cleaned and preserved, and which later fell into the hands of L. G. Olmstead, LL. D., who was an archæologist as well as a traveler of note. He had no hesitation in pronouncing it one of the celebrated "Chorean Beads" formerly used in the religious ceremonies in ancient Egypt. He kept it for a long time as one of his most priceless treasures. He was formerly from Erie County, but at that time resided at Fort Edward, New York. It is said there are only about thirty of those famous beads in existence, and the others are deposited in the great museums of the world. We learn that this one ultimately found its way into the Erie Public Museum where it is highly treasured.

We, therefore, must conclude that this region was one time the habitat of the wonderful and mysterious race of human beings who had a very numerous population, and which dominated the entire region to our west, and possibly may have had communication with the peoples of Europe.

In the counties of Warren, Crawford, Venango, Clarion and, in fact, throughout the entire region, there have been found many relics of ancient inhabitants of the region.

As these lines are being written, archæologists are at work exploring the Sugar Run Mound Site in Corydon Township, Warren

County, and interest has been so great and visitors to the site so numerous that at the request of the Warren County Historical Society, Dr. C. E. Schaeffer, assistant ethnologist, has prepared a series of questions and answers and several thousand copies have been printed and given to inquiring visitors in order to minimize interference with the workers by inquiring visitors.

The Sugar Run site is a low-lying earth mound made some centuries ago by an American Indian group, as a burying place for its dead. Before actual digging started the site was surveyed and laid off in equal, numbered squares on a map, to locate the exact spot on which any material might be exposed. The series of open squares and trenches now cutting the site follow this map, and lay bare the mound's inner structure. As each square is dug the soil is carefully examined for human remains which, when found, are examined for their nature and their relation to other features. The various soil strata shown on the trench sides are traced to determine how the mound was constructed. As the work progresses, all such data are transferred to maps, supplemented by photographs and sketches of the more important finds. Trowels and brushes substitute for shovels in exposing more delicate features. Some areas, such as those enclosing burials, are screened for small beads and ornaments. The artifacts, arrow-heads, gorgets, awls, axes, etc., are catalogued according to location; the pottery cleaned and restored; and the vegetable and animal remains preserved for future identification. All of these things are significant for a reconstruction of the life of these pre-literate men. When the scientific work here is completed, another chapter in Pennsylvania pre-Columbian history should stand revealed.

Several things suggested prehistoric occupation of this area: the location at the junction of the Allegheny River and Sugar Run offered advantages to the Indians, as good fishing and hunting; protection against extreme winds and temperatures; wood and water for domestic use; a river highway for intertribal trade and travel; rich bottom land for cultivation. Experience has shown these things were regarded as important in the selection of village and camp sites, of which the burial mounds are adjuncts. The low rise in the ground suggested a mound at this point. Numerous artifacts had been recovered by collectors from the surface of this area, suggesting human occupation.

At this writing the only feature of this area uncovered is the burial ground. Ten cremated burials, consisting of small quantities of burned human bone, were scattered throughout the mound. With

them and about them were what seem to have been burial offerings, such as mica, red ochre, cache blades, arrow points, marine shells, copper and other implements. The central and most important find, however, was of two rock cists each containing an uncremated skeleton in good preservation. Deposited with one of these, beneath the skull, were fifty-three cache blades; near its feet, quantities of red and yellow ochre, a gorget and a sheet of mica. Near the center of the same burial was a lump of galena (crystal lead). Mica and cache blades were found, too, with the second skeleton. Following this discovery a burial, laid down into the mound margin after its construction, was exposed. Beside it lay a small clay pot. This may prove to be a prehistoric Iroquois burial. In the central section of the mound, river stones forming an integral part of its structure, were found and may still be seen there.

The earlier Sugar Run people appear to represent an eastern outpost of the well-known "Mound-builders" of the Mississippi drainage basin. Contrary to common belief, the "Mound-builders" were not fundamentally different, in race or civilization, from many of the Indian tribes of the historic period.

The term "Hopewellian," from a site in Ohio where the culture was first identified, may be tentatively applied to the Sugar Run occupation, to distinguish it from other mound sites of the Middle Atlantic area. The Allegheny River suggests itself as the corridor through which these people penetrated into western Pennsylvania and New York. They probably flourished about 1000 A. D.

Hopewell civilization may be said to represent a stage midway between the wandering hunting groups of the northern forests and the high civilizations of the Middle America. These people possessed a knowledge of maize cultivation and clay vessel manufacture, two important milestones in the evolution of New World civilization.

No intimate connection can be traced between "Mound-builders" of Sugar Run and the Cornplanter Band or the other Senecas living just across the line in New York State. The former appear to have lived along and disappeared from the Upper Allegheny many years before the ancestors of the present Senecas first appeared hereabouts. Both groups, however, form sub-types of the racial strain common to all American Indians.

Until the village site of these "Mound-builders" is found and investigated, details as to their customs, other than their burial practices, will remain unknown. Its location, therefore, is a matter of first importance. It may be in the large field to the north, but only careful



Cow Run, Oil Creek

exploration will decide. As the mound excavation goes on, it is possible that other burial remains may be found.

All of the material recovered from this site will be studied and analyzed by experts over the following months. When the results of their labors are all in, formal reports of the investigation will be published and distributed in professional quarters to make the information available to archæologists in other areas. Leaflets, illustrated talks, exhibits and the like will be prepared for the non-professional. Finally, the artifacts will be placed in permanent storage or on exhibition at some central repository for the benefit of the serious or casual student of archæology.

Part of the function of the Pennsylvania Historical Commission is to explore, study and preserve prehistoric remains of Pennsylvania, and to make available information about them to the general public, and this the commission is now doing at this site. These excavations are made under the direction of professional archæologists, with labor furnished mainly through the interest of the United States Office of Indian Affairs, Buffalo Agency. Advisory and other specialized services are being generously given by the Smithsonian Institution, the Rochester Museum of Arts and Sciences and by many others. For instance, the human skeletal material will be measured and studied by Dr. T. D. Stewart, physical anthropologist of the Smithsonian. The Warren County Historical Society is acting as sponsors of the local research program and Mr. and Mrs. Smith, owners of the site, are generously coöperating in permitting the research work upon their property.

The history of any American region, with respect to its varied relations and associations, naturally dates back to the discovery and the occupation of the continent by the adventurous and enterprising Europeans.

One of the great endowments which nature has bestowed upon mankind is the universal tendency to seek, grasp, and gradually develop such knowledge as contributes to the advancement, welfare and preservation of his own existence and there have been apparent occasions when some person was especially endowed with vision and inspiration which has enabled him to accomplish something which was much needed by man, or of great value and benefit to him. When any great discovery or revelation is necessary for the welfare of man, the means and the opportunities are naturally sought and ultimately produced and made available for the accomplishment of the objective. Sometimes the development may be sudden, or accidental, but more

generally is promoted and advanced to completion by slow and progressive degrees.

The discovery of America may truly be viewed in this light. The time had arrived in which the existing circumstances made apparent the great advantages to the world such a revelation would afford. The age was one of great intellectual restlessness. The commercial intercourse that then existed among mankind afforded many blessings to the different regions of the known world. The little oriental traffic that percolated through Mohammedan channels materially enriched those countries of Europe that at the time monopolized it. The Indies, with the fabled land of Cathay, the mines of Golconda, the golden kingdoms of Cipango and Mango, were themes in which imagination ran riot. Of all the channels of enterprise, maritime discovery was the most tempting and it was making rapid progress. But the pursuit of exploration had not yet reached a basis of scientific probability, and much absurd fiction was mingled with ascertained facts, even though the compass and astrolabe had been recently adapted to navigation.

The genius who grasped the great problem of maritime discovery, who, by his noble work, his remarkable courage and perseverance, opened to civilization a new theatre of action, was a sea farer of the city of Genoa; one of humble condition, but who, through years of scientific research and a life of patient toil, wrought out the theories which he at last so triumphantly verified. But the first visible development had occurred ages before, when a rude and unlettered searanger had been driven by adverse winds across a sea which he had thought to be boundless, to a land whose existence had never entered his mind.

We shall, as far as history affords data, recount the exploits of those adventurous and ignorant seamen of northern Europe who, nearly five hundred years previous to the time of Columbus, had found a continent beyond the Atlantic, which was then known as the "Sea of Darkness," and was regarded by mariners with great dread and superstition.

Those hardy people, called Northmen or Norsemen, were Scandinavians, who then inhabited that portion of Europe embraced in Norway, Sweden, Denmark and Finland, and being a brave, adventurous race, accustomed to hardships and possessed of nautical skill, made themselves masters of the northern seas, and became a terror to other nations, more honestly engaged in maritime traffic, by whom

they were regarded as pirates and freebooters. Their vessels were craft of a few tons, rudely equipped, clumsily rigged, always carrying on the prow the image of the head of a dragon or some imaginary monster, and generally commanded by the sons of Jarls, or Earls, who themselves were but retired sea-robbers. The historical chronicles of Iceland, called the Saga, which have been the subject of great research by modern historians, furnish much data and many interesting facts concerning those wild rovers of the sea. Those pirate captains were called the Vikings, and they were as severe and tyrannical over their mariners and fighting men as they were remorseless in the treatment of their victims. Lawless marauders, as were the Vikings and their followers, they were the best and most adventurous navigators of the age, as well as fearless and redoubtable warriors.

As early as the beginning of the ninth century, they had discovered and established colonies, or stations, on the Faroe Islands, whence they made frequent and bloody incursions into Scotland and England, and whence, about that time, a commander named Naddok on one of his expeditions, penetrated so far north that he sighted the hitherto unknown island of Iceland. He seems to have been more disgusted than otherwise at its bleak barrenness, for he made no attempt at occupation; but after skirting its shores and mountains, called it Snow-land, and returned home.

Subsequently, "a certain pyrate, whose name was Flokko" (this is the language of the historical chronicles of Iceland), having heard Naddok's account, set sail for the new country in 865, and being resolved not only to see, but to colonize it, he took with him, from Norway, some families, implements, and cattle, for that purpose. This, of course, was not a piratical outfit.

The Vikings having no knowledge of the mariner's compass, Flokko took with him three ravens, which had previously received the rite of consecration from the priests of the pagan god Odin. These birds were depended on to give the navigator information in regard to the proximation of land. When a few days out he liberated the first raven, which at once returned in the direction whence the ship had come, and led him to infer that there was no land nearer than the port from which he had sailed. Farther on, the second raven was released, and, after hovering in a confused manner for some time, returned to the vessel. Two days later, upon being again set free, it rose to a great height, and then sped straight to the northwest. The Viking followed the feathered pilot and soon reached the land of his search.

The colony proving a failure, Flokko and his people returned to Norway, perhaps as much disgusted with the country as Naddok had been, for they gave discouraging reports of it and bestowed upon it the name of Iceland.

In the year 874 the Earl of Ingolf who had, in some way, incurred the displeasure of his King—Harold the Fairhaired, of Norway—put his family and all his goods on board a ship and fled to Iceland, where he established a colony which proved a permanent one, and which now has an existence of over a thousand years' duration.

Not long after the settlement of Iceland, a sailor named Gunnbiorn, upon one occasion, had the misfortune to be blown off the coast, before an easterly gale, across the narrow sea which separates the island from Greenland, and thrown upon the coast of that inhospitable country. From thence, he succeeded in returning to Iceland bringing glowing accounts of his new discovery. But no colonists went there until 985, when Earl Eric, the Red, himself an outlaw in Norway, as Ingolf had been, fled his country and migrated to Greenland, from whence he spread such favorable reports, after the custom of founders of new colonies, that in the year 989 twenty-five vessels, loaded with families, goods and cattle, sailed for the new land. Eleven of these ships were unfortunately lost on the passage, but fourteen arrived in safety and by these Greenland was extensively settled and for many years emigration thence from Norway and Denmark was considerable.

In the year A. D. 1000, there was a bold young Danish Viking named Biarn who, returning from a long voyage, learned that, during his absence, his father, named Herjulf, had emigrated to Greenland and joined the colony of Red Eric. He immediately set sail thither, without even discharging his cargo, and this sturdy Viking ventured upon an unknown and boisterous ocean, in the midst of rough weather, in his rude, tiny vessel, without a compass. A heavy gale blowing from the northeast, amidst a thick fog, he missed his destination and, after being driven for many days before the wind, he came in sight of land which he at once knew was not Greenland for it was flat wooded country, with no ice hills such as he had been told to expect.

It is generally believed, though not certainly known, that the land first seen by Biarn was the coast of Nova Scotia; but whatever it was, there can be little doubt that he and his crew were the first Europeans who ever saw land belonging to the North American Continent. Little did they comprehend the magnitude or the importance of their discovery.

The crew had great desire to go ashore, but the captain refused, and turning his course more towards the north, keeping well out at sea, sailed for two days and nights, after which he again approached the coast, but still found the same low, level shore, thickly timbered, and having no resemblance to the land he sought. Again he stood away on his course for two days, and then for the third time he made land. This he found to be "high and mountainous, with snowy mountains." By sailing close to the shore, he discovered it to be an island, not the haven he wished for, and once more he stood out, and ran before a brisk southwest wind for three days and nights, when at last he saw the rugged coast of Greenland, and soon had the joy of meeting his father whom he had so long sought.

When Biarn related to Earl Eric, and the other colonists, the story of his involuntary voyage to the unknown country, he was censured by them for having failed to explore or land upon it. But his chief desire was to reach his father in the land which the latter had made his home, and after that to make regular voyages between Greenland and Norway, in which traffic he hoped to realize much gain. Now that he had reached the place where his father settled, called Herjulfness, he was too much overjoyed to have any regret for his neglect to explore the lands he had seen, or to feel any desire to return to them for further observation.

To the sons of old Eric the Red, however, and particularly to Leif, the eldest of them, the desire to visit and explore the new regions which Biarn had seen became great and, with Eric's approval, he purchased, in the year 1001, Biarn's ship and fitted her for the voyage. A crew of thirty-five men were employed and Biarn himself agreed to accompany the expedition. The old Earl himself had been prevailed upon by his son to command, but as he was riding to the port from which the vessel was to depart, the horse on which he rode stumbled and threw the old Viking to the ground. Very superstitious, he saw an omen which he declared was a warning to him to attempt no more voyages for the discovery of new countries. His son Leif then sailed in command of the vessel which left her port most auspiciously and started boldly away southwestwardly over the unknown sea.

It was the intention of Leif to retrace, as nearly as possible, the vessel's former course, thus to make, first the high rugged island which Biarn had last seen, and from there to skirt the land until he should reach the other points seen by the bold young navigator. The voyage prospered and, in due time, they saw before them the lofty hills which Biarn at once recognized as those of the island whence he had taken

his last departure. It was not intended to stop here long, but the new commander went on shore and made some explorations which showed him that it was a most forbidding place, the entire space from the sea to the base of the mountain being covered with flat stones which lay so thickly that no soil or vegetation appeared among them. With a feeling of disappointment he named the discovery Helluland, from the word *hella* which, in the Norse dialect, signifies a flat stone. Then he reëmbarked and after a further exploration by water, among deep bays, harbors and coves, with which the island was greatly indented, he proceeded on his way to seek lands which had first greeted the eyes of Biarn, that level wooded country which he had described and which seemed most attractive to the imaginations of those rough rovers, whose whole lives had been spent upon the stormy seas and among the glaciers and wild crags of the barren north. Keeping away to the southwest, he again made land; this time a fair looking region, covered with trees, to which he gave the name of Markland (or Woodland). It is most likely that this was the island now known as Cape Breton.

Beyond this he made another landing, finding still the same distinguishing natural features. But his love of adventure and desire for discovery was not yet satisfied and he again stood bravely on towards the southwest before a brisk northerly wind. After three days and nights, steadily on this course, again came the welcome cry of land and, while waiting for good weather, a landing was made to examine the region. It has never been satisfactorily settled exactly where this land was, but beyond doubt, was a part of the New England coast and is generally regarded to have been the island of Martha's Vineyard, south of the State of Massachusetts.

Leif made a short stay here, then coasted along the shore and proceeded, as the Saga records, "up a river which came through a lake." Here he ordered the vessel to be securely moored and preparations to be made for winter quarters. Autumn had already made its appearance, but rude houses were speedily built and soon all was made secure. Among the crew was a man named Tyrker—not one of their own countrymen, but a Southron from the lands of Vineyards—and he, in one of his rambles on shore, found grapes in profusion, growing wild in the woods. The discovery was hailed with great joy by these Northmen who had never seen grapes in Greenland, Iceland, or Norway. The ripe grapes were freely gathered and eaten by Leif's people, which they found delicious to the taste, and they cured great

quantities of them by drying in the sun. Leif was highly elated with the mild climate and the delicious fruit, and he named the country Vinland—the Home of the Vine. Soon, however, the bright days of Indian Summer were gone, and the snow storms and shrill winds of winter came; but the Viking's crew had seen the deeper snows of Norway, and had felt the sting of the icy gales which roar across the Arctic Circle, and they could laugh at the rigors of a New England winter. During this season they gathered great store of the different kinds of timber and wood which grew so profusely in "Vinland," but



Ebenezer's Spring, Clarion

(Holmes Crosby, Architect)

were scarce and highly prized in their own country. On the opening of spring, they loaded their ship with these, and then filling their long boat, and all available space on the vessel with dried grapes, they left their winter home and sailed for Greenland. On the homeward voyage, a day or two before his arrival, Leif rescued a shipwrecked crew which he brought back along to the port of his destination. One of these was a woman, named Gudrid, wife of the captain of the wrecked vessel, who soon died, and his widow married Thorstein, a brother of Leif, and son of the Earl, Eric the Red.

The place where Leif and his followers had passed the winter, and which they had named Vinland, is generally supposed to have

been situated on an arm of Narragansett Bay, below the mouth of the Taunton River, and near to the town of Tiverton, in Rhode Island. And of this land, the explorers brought back to Greenland the most marvelous accounts. It was, they said, a region of almost unbroken summer (it is not strange that they thought it such, considering how cold and sterile was the land which they called home). And they told how delightful was its location, how great its fertility, and how abundant its rich fruits and rare woods. They indulged to the full, that propensity which is everywhere found in human nature, and which seems to be universal among those who visit remote regions; gross exaggeration of facts relating to the wonders they had seen in their mysterious journeyings. If they did not paint these in colors as glowing as those in which the Spanish explorers depicted the golden El Dorado and the Fountain of Youth, it was probably less on account of their stricter adherence to truth, than because they lacked the vivid and gorgeous imagination of the Southern adventurers.

So the wonderful tale was told from mouth to mouth. The newly discovered land became known as "Vinland the Good" and its enterprising discoverer received the name of "Leif the Fortunate." Soon the story was carried to Norway and Denmark from whence, eventually, it was heard of in a dim, vague way, in other parts of Europe.

Soon after Leif's return, he made a journey to Norway and while there became converted from the Norse paganism to Christianity, and when he again returned to Greenland, he took with him some of the Christian priests, which act greatly incensed his father—for Red Eric was firm in his pagan faith, and continued unshaken in the worship of the Viking's gods, Odin and Thor, until his death, which occurred soon after.

Having now, by his father's death, become the head of the family, Leif unwillingly abandoned the project which he entertained of another voyage to Vinland the Good; and, indeed, he resolved henceforth to live quietly at home, as his father had done, and so no more was ever heard of the ocean adventures or exploits of Leif the Fortunate.

But his brother, Thorvald (who had also embraced the Christian religion through the labors of the Norwegian priests), took up the enterprise and soon departed, in his brother's ship, for the western land, where he arrived safely after a short and prosperous voyage. Having without difficulty found the houses erected by his brother, he took possession and there passed the winter.

The next year, he pushed his explorations far to the westward (probably through Long Island Sound), as far as "another lake through which a river flowed to the sea." The explorers were enchanted with the green grass, the groves of great trees, and abundance of vegetable growth which were all so strange to them. They made many landings upon the islands and each time their joy and admiration was increased.

Thorvald and his men also passed the following winter in the cabins built by Leif, and again, in the spring, made voyages and journeyings to the northward and eastward, passing Cape Cod, and, it is supposed, penetrating up Massachusetts Bay as far as the vicinity of Boston.

They had never seen any of the natives of the country, until, upon one of their expeditions, they suddenly came upon three boats made of skins, and set up as tents. Under there were nine savages, asleep. The Viking and his men had the greatest contempt for these beings and bestowed on them the name of Skraellings, which, in the Norse language, was a term of the most bitter opprobrium. In fact, they considered them as no better than wild beasts; and so, when they found these sleeping so quietly, and unconscious of danger, they followed the instincts of their Northern nature, and falling at once upon the unoffending natives, they slew all but one who escaped with his life, but greatly terrified.

As they came to a pleasant point of land, covered with the dark evergreen of fir trees, Thorvald said to his followers: "Here on this cape would I wish to raise my dwelling." He little thought how soon his desire would be realized.

The frightened native, who had escaped slaughter by the Northmen, had aroused great numbers of his people, who were then determined to avenge the cruel murder of their companions, and remained hidden until an opportunity should present itself. So, a little further on, at a time when the party of explorers were resting in fancied security, they were surprised by the sound of the terrible war-whoop, and an attack by a great number of the Skraellings. In dismay they fled to their vessels, and raised the wooden shield, behind which they were wont to fight their enemies. From thence they discharged their arrows, and soon the natives retired, but not until one of the white men had been wounded in the side by a dart from the Skraellings. The wounded man was none other than Thorvald himself and, when he withdrew the dart from the wound, and knew that his hurt was

mortal, he told his followers to bear him to the pleasant promontory and bury him there among the fir trees. "It may be," said he "that it was a true word which I spake, that I would dwell there for a time; there shall ye bury me, and set crosses at my feet and head, and call the place Krossaness, forever, in all time to come." Krossaness, in the Norse language, signifies Cross Cape, and this place is supposed to be identical with the point now called Point Alderton, in Boston Harbor. His men obeyed the dying command of the young sea-king, and left him there, with the Christian cross (the first ever erected on the American Continent) marking the spot where he slept in peace beneath the evergreens. The party was now without a head and, being entirely disheartened, returned to Greenland.

Then Thorstein, another son of Eric, victualled a vessel and sailed in search of the body of his brother, resolved to bring it back to the family tomb. This was in the year 1005. His company numbered twenty-five men and he made a faithful search, but failed to find the point called Krossaness, and so, after a time, returned unsuccessful, and soon after died of scurvy, contracted on the voyage. Thorstein was the last of the sons of Eric who ever journeyed to America, but the blood of the Red Earl would not be still. His daughter, Freydis, sister of Leif, Thorvald and Thorstein, next planned an expedition to the land of vines. She was the wife of Thorvard, the captain of a trading ship, and he, with one Thorffinn Karlsefne, a rich merchant of Iceland, fitted out three vessels with which they sailed in the spring of the year 1007. The wife of Karlsefne was none other than Gudrid, the widow of Thorstein, she who had been rescued from the shipwreck by Leif, on the return voyage from Vinland. Besides Freydis and Gudrid, many other women were taken, as well as cattle, implements, and abundant stores, for it was intended to found a permanent colony. The company numbered more than one hundred persons, with Thorffinn in command, though the woman Freydis was in reality the master spirit of the enterprise.

Their outward voyage was a prosperous one. On arriving at the lands near their destination, they found a huge carcass of a whale which had been stranded high and dry upon the sandy shore, and this was not only a great accession to their commissariat, but it was esteemed as a delicious food by those hyperborean epicures.

It is not known whether or not they settled at the place where Leif built his houses, but they found abundance of game and fish, and great trees covered with grapes, while a little way off were fields of "self-

sown wheat" (by which is probably meant the Indian maize). Here they expected to pass a pleasant and unmolested life; but soon they were visited by the "Skraellings," who were described as "black and ill-favored, with coarse hair on the head, with large eyes and broad cheeks." They seemed to be entirely ignorant of the use of edged implements, or of their capabilities, and it is related that one of them playfully handling one of the Norse battle axes, apparently ignorant that it was a more formidable weapon than those of their own rude fashioning, dealt to one of his companions a blow which was instantly fatal.

These natives, however, offered no violence to the whites, but, after satisfying their curiosity, went away for a time; soon, however, returning in great numbers, and wishing to barter valuable skins and furs for red cloth, of which the colonists seem to have had a large quantity, and with which the natives were greatly pleased. Cows' milk was also freely given to them by the colonists, and this they appreciated highly.

But of a sudden, when all was progressing well, a bull, belonging to Thorffinn, burst out from among the trees and with a roaring which shook the very earth, rushed full upon the poor Skraellings who, thereupon, fled to their boats in great terror. For a long time they remained away, but after awhile they returned in a great body and gave battle to the Northmen, who, being vastly outnumbered, fled to the woods, after many had been killed by those natives whom they so much despised; and it is related that they would all have been slaughtered but for Freydis who, seizing a weapon from the body of one of the slain men, rushed upon the savages with great fury, making loud and piercing cries and wild gestures by which the Saga says: "They were as much terrified as on a former occasion they had been, by the bellowing of the bull. They rushed pell-mell to their boats, fled in dismay, and were seen no more."

This attack and its results greatly discouraged the colonists who at once demanded of their leader Karlsefne that they should return home without delay. He, being a merchant of wealth and consideration in Iceland, acceded to their wishes, and returned to that country, where he passed the remainder of his days in ease and splendor.

But Freydis, being a very bold and ambitious woman, was by no means satisfied with the result. She wished to found a permanent colony in which herself and her husband Thorvard should be the chief personages.

Three years later, she had organized another expedition, fitted out in partnership with two brothers—Icelanders—named Helgi and Finnbagi. In 1011 they sailed for the place where Leif had laid his winter quarters ten years before. There they arrived without accident or delay and found the booths, or houses, still standing, and in tolerable repair. But quietude did not reign there. In fact, peace could nowhere exist where lived the fierce and ambitious daughter of the Red Eric.

She quarreled with the brothers, Helgi and Finnbagi, and plotted to take their lives, inducing Thorvard also to enter into the infernal conspiracy. Inspired by her malignant counsel, Thorvard persuaded his own followers to join the plot, and together they fell upon the brothers and their company, in their separate quarters, and slew them. Of these unhappy victims, there were five women whom the male conspirators would gladly have allowed to live, but the tiger spirit of Freydis would not have it so, and finding that her followers refused to do the murder, she killed all with her own hand, disregarding their piteous appeals for mercy. Nothing but disaster and gloom followed this bloody deed, and the long and dreary winter which ensued was filled with remorse and dread for the guilty colonists. So when spring came again, it was unanimously agreed to abandon the settlement and return to Greenland.

When Leif the Fortunate was told of his sister's crimes, he debated whether he should visit a just punishment upon her, but his brotherly feeling prevailed and he allowed her to escape with her life, but disowned her, and predicted for her remaining years only woe and execration, which, the chronicle says, was completely fulfilled.

This was the last Norse expedition to the American coast, of which there is any account which seems at all authentic. One Saga has it that the place was visited several times afterwards, among these visitors being a priest named Eric, who saw the land in 1321, but of this there is great doubt, and we are left to conclude that the entire period during which the Northmen sailed to, and transiently occupied, the place which they called Vinland covered a space of less than fifteen years. Why such an enticing field should have been so suddenly abandoned by them must always be a mystery. Certainly it could not have been through dread of the savage natives, for those ocean freebooters hardly knew fear; and it could not have been that they thought the country not worth the occupation, for the land seemed limitless in extent, and far richer and more productive than any which they had ever dwelt in. The most reasonable theory is that the cause lay in the

overwhelming troubles which we know came upon Greenland and Iceland soon after, resulting in the total extinguishment of the colonies in the former country, and in the almost complete abandonment of navigation in the northern waters.

A frightful disease, known as the Black Death, spread over the countries of northern Europe, and from thence was communicated to Iceland and Greenland, resulting almost in depopulation. In the midst of this visitation, the Esquimaux opened unrelenting war on the Greenland settlements, and to add to these horrors, there occurred two successive winters of such extreme severity, that the adjacent seas were blocked with ice of incredible thickness, and forever cut off the settlers from their fellowmen. That was the last ever heard of the colony founded by Eric the Red. All knowledge of the country called Greenland, faded away into a shadowy tradition; and it was not until ages afterward that its re-discovery brought it again to the attention of men. It was but natural, therefore, that in the oblivion which settled down on the parent country (as Greenland might properly be called) the veil of forgetfulness should also fall on the half known land which her sons had discovered.

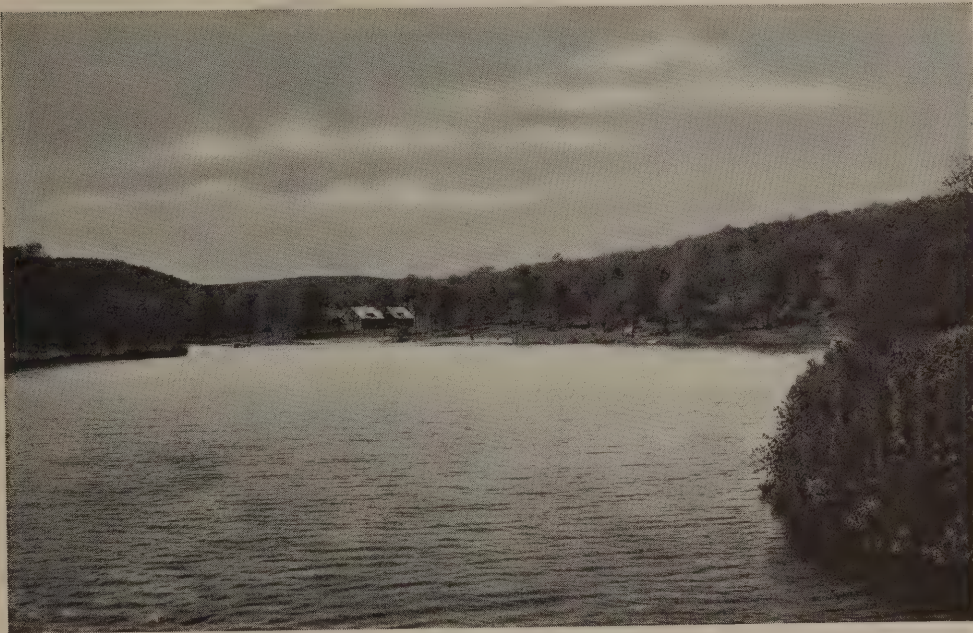
The story is shadowy and incomplete, and might, by many, be regarded as mythical, but for the proofs which exist in clearly cut Runic inscriptions, engraved on the face of rocks near the town of Dighton, in southeastern Massachusetts, which remain there, as they were found by the Puritan settlers who came there in 1620 and give authentic support to the Saga's romantic account of the Northmen's voyages to Vinland.

As has been said, the knowledge of the discoveries of Biarn and Leif slowly spread from Norway to other parts of Europe. In seventy-five years it had reached Germany, being brought there by a historian called Adam, of Bremen, who had visited Sweden at that time.

By most of those who heard these rumors they were regarded as mere inventions, but the mind of Columbus—nearly five hundred years later—accepted them as possibilities, to say the least; and it is known that he made a journey to Iceland for the purpose of determining how far they were true. We do not know to what extent he received them as substantiating the theories which he had deduced from his scientific investigations—whether they made him more firm in his determination to solve the great problem which was the idea of his life—but whether or not, they did, can never bedim the surpassing lustre of his achievements, or cause us to give to any name but that of

Christopher Columbus the honor of First Discoverer of the land in which we live.

Columbus was unquestionably a man of genius. He was a bold, skillful navigator, better acquainted with the principles of cosmography and astronomy than the average navigator of his time, a man of original ideas fertile in his plans, and persistent in the execution of them. The impression he made on those with whom he came in contact even in the days of his poverty, such as Fray Juan Perez, the treasurer, Louis de Santangel, the Duke of Medina Sidonia, and Queen Isabella herself, shows that he had great powers of persuasion



Twin Lakes Park Between Johnsonburg and Kane

and was possessed of personal magnetism. His success in overcoming the obstacles to his expeditions and surmounting the difficulties of his voyages exhibit him as a man of most unusual resources and of unflinching determination. Columbus was also of a deeply religious nature. Whatever influence scientific theories and the ambition for fame and wealth, natural with man, may have had over him, in advocating his enterprise he never failed to insist on the conversion of the pagan peoples that he would discover as one of the primary objects of his undertaking. Even when clouds had settled over his career, after his return as a prisoner from the lands he had discovered, he was ready to devote all his possessions and the remaining years of his life

to set sail again for the purpose of rescuing Christ's Sepulchre from the hands of the infidel. Perhaps, the given name of Columbus, Christopher, meaning Christ-bearer, was prophetic.

There were other early discoveries. On March 5, 1496, John Cabot and his three sons obtained a patent from Henry VII, King of England, authorizing them to search for islands, provinces, or regions in the eastern, western, or northern seas. Under this charter, in May, 1497, he embarked in a single vessel, accompanied by his son, Sebastian, sailed west, as he said, seven hundred leagues, and on June twenty-fourth following, came upon land which he reported to have been part of a continent. He sailed along the coast for about three hundred leagues, landed at several places, and planted the banners of England and Venice, he being a Venetian. He returned to Bristol in August of the same year and his discoveries are said to have attracted the admiration of the city and the favor of the English King. But for unknown reasons, he did not make another voyage and it is evident that he did not have a proper conception of the nature and importance of his discoveries.

Sebastian Cabot, who had been associated with his father's expedition of the year previous, led forth, in May, 1498, two ships, and a company of English volunteers, on a voyage in search of a short western passage to China and Japan. He sailed so far to the north that in the early part of July, the light of day was almost continuous. Finding the sea full of icebergs, he turned more to the south, and arrived at land which is generally supposed to have been Newfoundland. Pursuing his search, he reached the main land of North America, landed in many places, and saw natives clad in skins of beasts. He coasted along the shore as far as Florida; but his object had been to find a passage to the rich continent of Asia, and though he had discovered an immense territory under a temperate sky, his voyage was considered a failure. A navigator named Vasco da Gama had reached India by the way of the Cape of Good Hope, and filled the world with his fame. Therefore, the discoveries of the Cabots were considered of little value. Though spoken of in English annals as "Sebastian Cabote, the great seaman," he does not appear to have been possessed of sufficient learning and powers of description to impress upon the leading minds of the Old World, that the new one, which he had discovered, was of such vast importance to the ultimate welfare of mankind.

Amerigo Vespucci (Americus Vespucius) an Italian navigator, obtained the glory of associating his name with that of the new found world. He came of a noble but not wealthy family, and received a

finished education. Later in life he engaged in commerce in Seville. He was in that city when Columbus returned from his first voyage and became enamored with a career of nautical adventure by occasionally meeting with the latter and listening to his accounts of his new discoveries. He subsequently entered the service of the King of Portugal, and sailed on his first voyage in the year 1499. The expedition reached the coast of Brazil and other points of the South American Continent, and he subsequently made other successful voyages of discovery. Being a man of literary attainments, he was enabled to write descriptions of his discoveries in such a manner as to attract special attention from the learned men of Europe, and in this particular possessed great advantages over his predecessors. One of his narratives was published at Strasbourg in 1505, under the title of *Americus Vesputius de Orbe Antartico per Regem Portugallioe pridem inventa*. His vivid and glowing accounts were highly interesting, and being the earliest published description of the New World, was called by his name, Amerigo, or America.

Pinzon, a companion of Columbus on his first voyage, discovered the mouth of the Amazon in the year 1500.

In 1513 Juan Ponce de Leon, a Spanish cavalier, fitted out a little squadron at his own cost, put to sea from Porto Rico, and directed his course to the unexplored west. On the twenty-seventh of March, Easter Sunday, called in Spanish, *Pásqua Florida*, the Feast of the Flowers, he came in sight of a region which he named Florida.

The Spaniards boldly pushed their explorations around the entire coast of the Gulf of Mexico and the South American Continent and in 1521 sent out the memorable expedition which resulted in the conquest of Mexico.

In 1524 the French Nation sent out an expedition under command of Giovanni Verrazzano, a Florentine. After a stormy voyage of fifty days, he reached the main land of North America, in latitude thirty-four degrees. He traced the coast southward for fifty leagues, and then, returning, sailed northward as far as Nova Scotia. He entered and explored the harbors now known as New York and Newport, gathering knowledge of the products and the inhabitants of the region, and claimed, for the French King, the whole country along the shores of which he ranged, under the name of New France. Upon his return to Europe, he prepared a written account of his voyages, which contains the earliest description extant of the eastern border of what is now the United States.

Ten years later, in 1534, the French sent Jacques Cartier to explore and colonize the New World, and he made his way to the coast of Newfoundland in twenty days. He sailed up the St. Lawrence, made extensive discoveries, and made persistent attempts at colonization but sickness and severe weather conditions long defeated all efforts to plant a permanent French colony in America.

In 1539 Hernando de Soto set sail with his expedition of six hundred men for exploration and conquest. He traversed the vast wilderness from the Florida coast to the Mississippi River, and after two years of hardships and misfortune, met his death and was consigned to the bosom of the great stream he had discovered.

In 1562 the Huguenots, French Protestants, founded their feeble colonies in Florida.

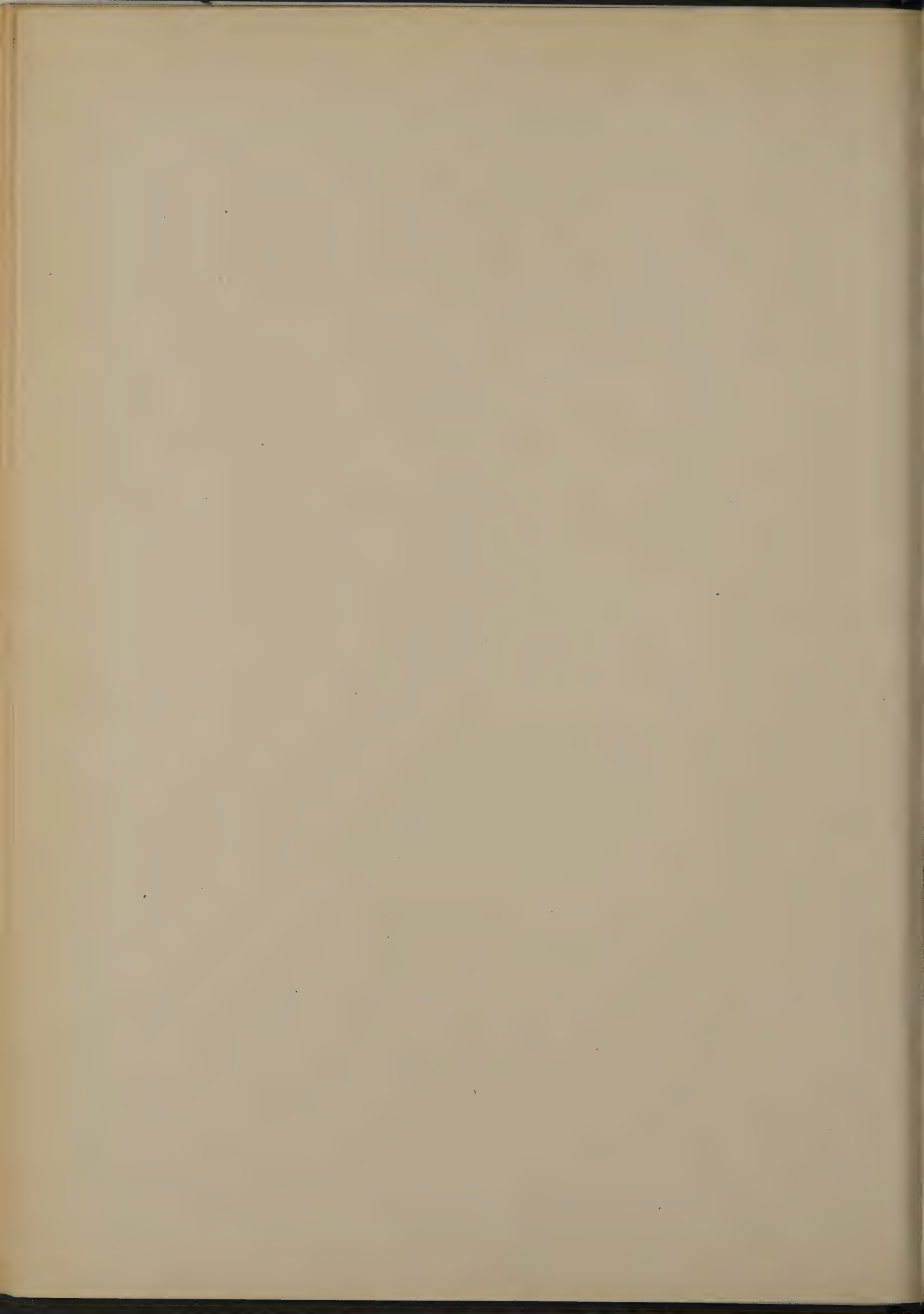
In 1564 the Spaniard, Pedro Menendez, made his expedition to Florida, destroyed the Huguenot colony, and laid the foundation of St. Augustine, the oldest town in the United States.

In 1578 Sir Humphrey Gilbert obtained a patent from Queen Elizabeth of England to establish a colony in North America. He led his expedition to Newfoundland, but failed to establish a colony, and on his return voyage, he and his crew were lost at sea.

About the year 1580 Sir Francis Drake accomplished his celebrated voyage around the globe. This was an event highly auspicious to mercantile enterprise, and greatly stimulated the English in their plans and efforts at colonization.

In 1584 the famous Sir Walter Raleigh, a half-brother of Gilbert, received a patent from Elizabeth, and renewed the effort to establish an English colony in America. He sent out an expedition which sailed with two vessels, made land near Cape Fear, coasted northward along the Carolina shore, and visited the sounds of Pamlico and Albemarle, and the neighboring islands of Wococon and Roanoke. The voyagers were delighted with their discoveries, gave glowing descriptions of them on their return to England, and the Queen named the region Virginia. Raleigh, possessing great wealth and influence, then made vigorous efforts to colonize, and in 1585 a squadron of seven ships, commanded by Sir Richard Grenville, conveyed his first company of emigrants to Virginia. A colony of 110 men was landed on Roanoke Island; but discouraged and homesick, they all returned to England the next year. A second band of fifteen men left on the island, was totally destroyed by the Indians. A third company of eighty-nine persons, men, women and children, organized to found "the city of Raleigh," came to Virginia in 1587; but in 1590, when an expedition

landed at their place of settlement with supplies, not a single person could be found, and nothing could be learned of the fate of the colony. In 1602 an expedition sent out by Raleigh's assignees, visited the American coast, named Cape Cod and the Elizabeth Islands; and the next year a similar one, sailing in the employ of some merchants of Bristol, entered Penobscot Bay and coasted as far southward as Martha's Vineyard.



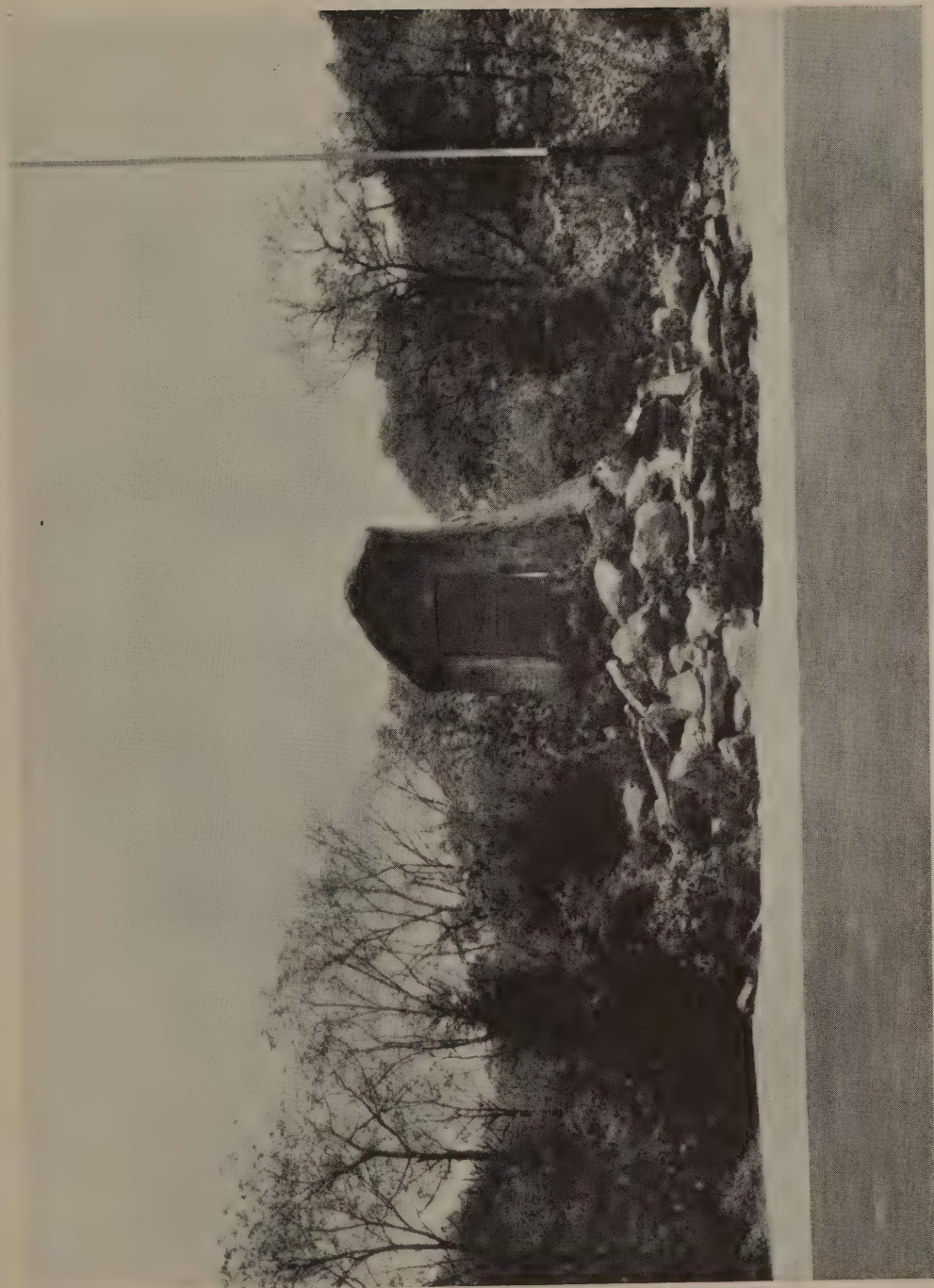
CHAPTER II

Indians

The name by which we know the aborigines of this continent, "Indians," was given to them by Columbus, prompted by the belief that the land which he discovered on October 12, 1492, was a part of India and the same name was given to those who were later found upon the continent. When the first Europeans landed upon the soil of North America, the original people were found throughout all of the vast region south of Labrador and between the Atlantic coast and the Mississippi River. Though they were divided into many tribes and subdivided, and speaking a great variety of dialects, the traditions of all the nations occupying that portion of the country as far south as the Roanoke and Ohio rivers traced their origin back to two great primitive branches, known as the Lenni Lenape and Mengwe. These two great groups of nations were called by the Europeans the Delawares and Iroquois. The Lenni Lenape, or Lenape received the name of Delawares from the English and the Mengwe were called the Iroquois by the French. Among their derivative nations, the Lenape were also known as the Wapanachki, and this name was variously corrupted by Europeans into Openaki, Openagi, Abenakis and Abenakis. The Mengwe were also called Mingoes; this corruption originated among ignorant white men and was from them adopted by the Delawares who applied it to their neighbors, the Mengwe by way of reproach, ill feeling and at times great animosity having existed between the two nations, a condition which unfortunately exists today among certain peoples. By some writers, practically all the nations included under the heads of Mengwe and Lenape, or Delawares and Iroquois, are called the Algonquin nations.

When the whites first became acquainted with these aborigines, they possessed many curious and interesting legends and traditions. There was a tradition among the Lenape that many centuries previous their ancestors dwelt in the extreme western part of the continent.

That after a long dwelling there, they began moving in the direction of the rising sun, and, in the course of time, arrived on the banks of the great river, to which they gave the name of Namoesi Sipu, or River of Fish (Mississippi). Here they first met the Mengwe, who had also migrated from a country far to the north and west, and had reached the Mississippi at a point farther north. After remaining awhile the scouts of the Lenape discovered that a country on the east side of the great river was inhabited by a powerful people called "Tallagawe" or "Allegewi" from whom, according to some writers, may have sprung the names of the Allegheny River and mountains. The prehistoric race commonly known as the "Mound Builders," which at one time occupied the greater portion of the Mississippi Valley, are generally supposed to be the people referred to in this tradition. In the transmitted story, it is related that mysterious people were represented as living in large cities, situated along the principal streams and surrounded by fortifications. Desiring to proceed farther eastward, the Lenape asked permission of the Allegewi to cross the river and settle in their vicinity. This request was not granted, but the Lenape were eventually told they could cross the river and proceed eastward to a country beyond the Allegewi, when they accepted the offer and commenced crossing. As soon as the Allegewi saw the great number of the Lenape, they became alarmed, and fell upon those who had crossed over, destroying them, and warned the others not to attempt a further passage. The Lenape then sought the assistance of the Mengwe, and an alliance was entered into, the two nations agreeing to conquer and divide the country. A long and bloody war followed, lasting through many years, and in which there was great loss of life on both sides. The Allegewi fought valiantly and most obstinately for their country, but finally the united nations prevailed and the "Allegewi" were conquered and the last remnant of them were driven far to the southward. The conquerors took possession of the lands and divided it between them, the Mengwe taking possession of the lands around the Great Lakes, and the Lenape choosing the region lying to the south and along the Ohio River and its tributaries. They lived here many ages, as peaceful neighbors, but gradually moved along in an eastward direction. The hunters of the Lenape finally crossed the mountains and discovered the waters of the Susquehanna and Delaware, and the great bays into which they flowed. They explored the country beyond the Delaware (now New Jersey), called it the Scheyichbi country, and upon reaching the banks of the Hudson,



The Boulder, Drake Park

they named it Mohicannittuck. After exploring all this vast region in several months' absence, they returned to their country and communicated everything they had seen; describing the new discovery as a land rich in game, fish, fowl and fruits and destitute of inhabitants. Soon they proceeded to occupy this country, and subsequently established themselves upon the four great rivers of the Atlantic slope, the Hudson, Delaware, Susquehanna and Potomac. They made the Delaware the center of their possessions, and named it Whittuck (river of the Lenape). They were finally divided into three great bodies, the larger portion settling along the Atlantic and the eastern slopes of the Allegheny Mountains, another along the eastern bank of the Mississippi, and a third continued to dwell on the west bank of that river. The Atlantic branch became subdivided into three tribes: the Turtle or Unamis; the Turkey or Unalchtgo, and the Wolf or Minsi. The two former inhabited the coast from the Hudson to the Potomac, and the latter, called by the English Muncey or Muncie, dwelt in the interior more adjacent to the Mengwe. They extended from Minsink, on the Delaware, where they had their council-seat, to the Hudson on the east, and occupied the valleys of the Delaware and Susquehanna, and were scattered as far west as the valley of the Allegheny.

The Mengwe, like their neighbors, also gradually moved eastward, occupying the shores of the Great Lakes, and establishing themselves over all that country from Lake Erie to the Hudson, and from the headwaters of the Allegheny, Susquehanna, and Delaware rivers, northward to Lake Ontario, and even across the St. Lawrence; thus really embracing nearly all of the State of New York, a portion of Canada, and northwestern Pennsylvania. This they figuratively styled their "long council house" within which the place of kindling the grand council fire was the Onondaga Valley, where delegates from all the tribes met in solemn deliberation. They existed as a confederation of tribes, and were usually known as the Five Nations in English annals. This alliance was composed of the Mohawks—"the fire-striking people"—they being the first to procure fire arms from the Dutch, the term arising from their flint-locks striking fire; the Senecas—"Mountaineers"—because they inhabited the hilly or mountainous parts of the Iroquois domain; the Cayugas—from the lake Queegue, on the shores of which they lived; the Onondagas from Ononago, signifying "the hill top," their principal town being set on a hill; the Oneidas—"the pipe makers"—a name given them because they were most ingenious in making tobacco pipes. They called themselves the Ho-de-no-saw-ne, or People of the Long House; implying that they

were one family, sheltered by the same roof. In the course of time a bitter enmity had arisen between the Mengwe and the Lenape, and this confederation was formed by mutual protection and defense against their hostile neighbors. They dated the formation of this league only a few years previous to the time when the white man first landed upon their shores. In 1712 the Tuscaroras, having been driven by the white settlers from their hunting grounds in the Carolinas, were received into the Iroquois confederation, which from that time became what was known as the Six Nations, and are reckoned the most powerful and celebrated of all the Indian nations of North America. Each nation was subdivided into eight tribes, which bore the names of Wolf, Bear, Beaver, Turtle, Deer, Snipe, Heron and Hawk; and at the formation of the league these names were retained and all their laws and customs made with reference to this division into tribes. They appear to have lived up to the requirements of the confederation, in good faith and mutual accord. The Mohawks occupied the country nearest the Hudson River, and were considered as holding the post of honor, the guarding of the eastern entrance to the "long house." The highest chief of that nation was also the leading war chief of the confederacy. The Senecas, who were the most numerous, and possessed of the highest degree of warlike spirit and military energy, defended the western portion of the "house," while the Cayugas were guardians over the frontier of the Delaware and Susquehanna valleys. The grand council fire was under the watch of the Onondagas, to whom also belonged the office of Chief Sachem, or highest chief magistrate of the league. The land of the Oneidas lay farther towards the north on Lake Ontario and the St. Lawrence. At the grand council-house at Onondago, all business relating to the confederation was transacted, and their deliberations were marked with good judgment and ability. The Iroquois council has been compared to the Wittenagamott of the Saxons, and Governor De Witt Clinton, of New York, spoke of them as the "Romans of America."

Different causes were assigned for the final conflict and sanguinary war which ensued between the Iroquois and the Delawares. Jealousy and animosity had long existed, frequent contests had occurred and a constant strife was kept alive between the two great nations. When the disturbing elements finally culminated in that long and bloody struggle, the superior advantages which the strong Iroquois possessed over their opposing neighbors is greatly attributed to the deliberations of the grand council at the "Long House." The result was the final subjugation of the Delawares, and hence, when the Euro-

peans began the settlement of Pennsylvania, this nation was found occupying a subordinate position to that of their abler and more powerful rivals. By the great Iroquois confederacy, the Eries, living south of the lake which perpetuates their name, were exterminated, the Hurons were at one time driven to the headwaters of the Mississippi, and the tribes of Hudson's Bay, of the distant Missouri, and the far south, were not removed from their attacks.

The Senecas, as we have observed, were the most numerous warlike and powerful of the Iroquois nations. They dwelt at the western door, and were expected to defend the territory of the confederacy against the entrance of enemies from the direction of the setting sun. The region they occupied extended over western New York and northwestern Pennsylvania. They were spread over the headwaters of the Allegheny, the first white man found them here in considerable numbers among the hills and valleys of this region, and their great chiefs, Cornplanter and Guyasuta, are prominently connected with the traditions and early annals of this historic ground. Some villages of the Delawares were found along the river and its tributaries. They were of the Wolf tribe, called by the English Munceys, and by the French Loups, which is the French word for Wolf. They had a village at Venango, now Franklin, and one on French Creek, which they called Custologa's Town, after their famous chief by that name, and where a number of celebrated chiefs were buried. Some tribes of Shawnees, and a remnant of the Wyandots, also called Hurons, were found along the Allegheny, and in portions of northwestern Pennsylvania. Some of these tribes called the Delawares their grandfathers.

The character of the aborigines of the northern portion of America is one of the most interesting topics associated with its history. Their appearance, customs and manners were so far distant from those of other nations known to the civilized world, and their individual character had so little in common with the more restrained and law-abiding Europeans, that they were, in the first stages of their acquaintance with the whites, classed by the latter among those wild and lawless races known as the savages, who, it was supposed, had few, if any, of the affections and higher emotions of humanity, but rather were bound by some mysterious link to the lower and baser passions of the animal creations. This estimate of their character, although very far from being a just or correct one, was yet not entirely wrong, for while later experience shows that, under the advantages of education and culture, the American Indian was capable of high attainments, both mental and moral, yet truth forces the admission

that many of the baser traits seemed to be deeply rooted in their nature; among these were the cruelty and treachery which were among their general characteristics, as also, still more marked, was their disposition to drunkenness, which appeared to have been universal.

The red men themselves charged that the vice of intoxication among them was not only originated, but was wilfully fostered by the Europeans, in order that they might be able more easily to circumvent them in trade and this allegation appears to have been well founded upon fact. William Penn, in a letter to the "Free Society of Traders," when referring to this weakness of the Pennsylvania Indians, says: "Since the Europeans came into these parts, they (the Indians) are grown great lovers of strong liquors—rum especially—and for it exchange the richest of their skins and furs. If they are heated with liquors they are restless till they have enough to sleep; that is their cry, 'some more, and I will go to sleep,' but when drunk, one of the most wretched spectacles in the world."

The current opinion of Indian character is too apt to be formed from the miserable hordes which later infested the western frontiers and hung on the skirts of settlements. These were usually composed of degenerate beings, corrupted and weakened by the vices of society, without having been benefited by its civilization. The proud independence which formed the main pillar of native virtue had been shaken down and the entire moral fabric lay in ruins. Their spirits were humiliated and debased by a sense of inferiority, and their native courage cowed and daunted by the superior knowledge and power of their enlightened neighbors. Society advanced upon them like one of the withering airs that will sometimes breed desolation over a whole region of fertility. It had enervated their strength, multiplied their diseases, and superinduced upon their original barbarity the low vices of artificial life. It had given them numerous superfluous wants, while it had diminished the means of their existence. It had driven before it the animals of the chase, who fly from the sound of the axe, and the smoke of the settlement, and seek refuge in the more remote forests and untrodden wilds. Thus the Indians on our later frontiers were often found to be mere wrecks and remnants of once powerful tribes, who lingered in the vicinity of settlements, and developed into a precarious and vagabond existence. Repining, hopeless poverty, a canker of the mind previously unknown to them, corroded their spirits and blighted every free and noble quality of their natures. They loitered like vagabonds about the settlements, among spacious dwellings replete with comforts, which only rendered them sensible of the com-

parative wretchedness of their own condition. Luxury spread its ample board before their eyes; but Indian hospitality was not there, and they were excluded from the festival. Plenty prevailed over the fields that were once their hunting grounds; but they were starving in the midst of abundance. The whole wilderness had blossomed into a garden; but they felt as reptiles that infested it. They were miserable strangers in the land which had been their own.

How different was their state while undisputed lords of the soil before the coming of the white man! Then their wants were few and the means of obtaining them within their power. They saw every one around them sharing the same lot, enduring the same hardships, feeding on the same ailments and clothed in the same rude garments. No roof then rose that was not open to the homeless stranger; no smoke curled among the trees, but he was welcome to sit down by its fire, and join the hunter in his repast.

Hospitality was one of the Indian's distinguishing virtues, and there was no such thing among them as individual starvation or want. As long as there was a cup of soup, it was divided. If a friend or stranger called he was welcome to all their wigwam could furnish. To offer him food was not a custom merely—it was a breach of politeness for him to refuse to eat, however full he might be.

The nature of the Indian was in all respects like the nature of people of any other nation, and if placed in the same circumstances, he exhibited the same passions and vices. But in his forest home there was not the same temptation to great crimes, nor what are usually considered the lesser ones, among civilized nations, of slander, scandal and gossip. They knew nothing of the desire for gain, and therefore were not made selfish by the love of hoarding, and there was no temptation to steal where they had all things in common.

It is not just to compare the Indian of the fifteenth century with the European of that age. Rather compare him with the barbarian of Britain, of Russia, of Lapland and Tartary, representing him as truly as these nations have been pictured, and he will not suffer by the comparison. How long were the Saxon and the Celt in becoming a civilized and Christian people?

In considering Indian character, some writers have been too inclined to indulge in prejudice and exaggeration rather than in sound philosophy. They have not sufficiently considered the peculiar circumstances in which the Indians have been placed, and the peculiar relations under which they have been educated. No being acts more rigidly from rule than the Indian. His whole conduct is regulated

according to some general maxims early implanted in his mind. The moral laws which governed him in his original state were few; but he conformed to them all. The white man abounds in laws of religion, morals and manners, but how many does he violate?

Regarding their liberality and improvidence, the following is quoted from the language of William Penn, employed in a letter addressed by him to the "Free Society of Traders":

"They excel in liberality. Nothing is too good for their friends. Give them a fine gun, coat, or other thing, it may pass twenty hands before it sticks. Light of heart, strong affections, but soon spent. The most merry creatures that live, feast and dance perpetually. They never have much, nor want much. Wealth circulateth like the blood, all parts partake, and though none shall want what another hath, yet exact observers of property. They care for little because they want but little, and the reason is, a little contents them. In this they are sufficiently revenged on us; if they are ignorant of our pleasure they are also free from our pains. They are not disquieted with bills of lading and exchange, nor perplexed with chancery suits and exchequer reckonings. We sweat and toil to live, their pleasure feeds them—I mean their hunting, fishing, and fowling, and this table is spread everywhere. They eat twice a day, morning and evening, their seats and table the ground."

The Indians were surely a most open-handed people. Among them there was no shortcoming—unless it might be cowardice—which they considered so reprehensible as a neglect of the requirements of hospitality. The observance of these was, with them, not a virtue but a duty. None among them ever thought that such action was, in any degree, worthy of praise, but a failure to practice it would brand the delinquent with disgrace. They would rather prefer themselves to suffer the pangs of hunger than to be remiss in their duty towards the unfortunate, the needy, or to those who were away from home and people.

But in regard to rights of property, they adopted, in a great degree, the doctrines of the Commune. It was their belief that the Great Spirit made the earth and ocean, the mountains, valleys, forests, lakes and rivers, and all that they contain, for the common good of mankind; and that whatever lived in the woods and hills, or swam in the rivers and sea, or grew out of the earth, was placed there for all

men, and that the idea of exclusive ownership in this common property was preposterous and wholly subversive of the benevolent intention of the Creator.

In his valuable contribution to Pennsylvania history, "The Indian Wars of Pennsylvania," the author's esteemed friend, C. Hale Sipe pays a beautiful tribute to the Indian as follows:



(Courtesy of Warren National Bank)

Springtime in the Allegheny Valley at Kinzua

"A child of nature, the Indian knew not the God of revelation; but the God of the universe and nature he acknowledged in all things around him—the sun, the moon, the stars, the flowers, the singing birds, the mighty oaks and sighing pines of the forest, the pleasant valleys, the babbling brooks, the dashing water-falls, the rushing rivers, the lofty mountains. Reverently he worshiped the Great Spirit, who created him, who governed the world, who taught the streams to flow and the bird to build her nest, who caused day and night and the changing seasons, who stocked the streams with fish and the

forests with game for his Red Children. To the Great Spirit went up many a pure prayer from the Indian's bosom. He prayed when he went on the chase; he prayed when he sat down to partake of the fruits of the chase; he prayed when he went to war. And when he closed his eyes in death, it was in the firm belief that death was mere transition to the Happy Hunting Ground, where, with care and sorrow removed, he would pursue the deer throughout endless ages of eternity."

The Moravian missionary, Rev. John Heckewelder, who labored for many years among the Delawares of Pennsylvania and Ohio, beginning his work in 1762, makes the following statements concerning the Indian's religion and character, in his "Indian Nations," published in 1818:

"The Indian considers himself as being created by an all-powerful, wise and benevolent Mannito (Manitou); all that he possesses, all that he enjoys, he looks upon as given to him or allotted for his use by the Great Spirit who gave him life. He therefore believes it to be his duty to adore and worship his Creator and benefactor; to acknowledge with gratitude his past favours, thank him for present blessings, and solicit the continuance of his good will. An old Indian told me, about fifty years ago, that when he was young, he still followed the custom of his father and ancestors, in climbing upon a high mountain or pinnacle, to thank the Great Spirit for all the benefits before bestowed, and to pray for a continuance of his favor; that they were sure their prayers were heard, and acceptable to the Great Spirit, although he did not himself appear unto them.

"They think that he, the Great Spirit, made the earth and all that it contains for the common good of mankind; when he stocked the country that he gave them with plenty of game, it was not for the benefit of a few, but of all. Every thing was given in common for the sons of men. . . . From this principle, hospitality flows as from its source. With them, it is not a virtue, but a strict duty. Hence they are never in search of excuses to avoid giving, but freely supply their neighbour's wants from the stock prepared for their own use. They give and are hospitable to all, without exception, and will always share with each other and often with the stranger, even to their last morsel. They rather would lie down themselves on

an empty stomach, then have it laid to their charge that they had neglected their duty by not satisfying the wants of the stranger, the sick or the needy. . . . They treat each other with civility, and show much affection on meeting after an absence. . . . They are not quarrelsome, and are always on their guard, so as not to offend each other. They do not fight with each other; they say that fighting is only for dogs and beasts. They are, however, fond of play, yet very careful that they do not offend. They are remarkable for the particular respect which they pay to old age. In all their meetings, whether public or private, they pay the greatest attention to the observations and advice of the aged; no one will attempt to contradict them, nor to interfere in any manner or even to speak, unless he is specially called upon."

Heckewelder says that, while marriages among the Indians were not contracted for life, it being understood that the parties were not to live together longer than they should be pleased with each other, yet both parties, sensible of this understanding, did every thing in their power to please each other. The husband built the home, and considered himself bound to support the wife and family by his exertions as hunter, fisher and trapper, while the wife took upon herself the labor of planting and raising corn and other products of the soil. The wife, he says, considered her labor much lighter than that of the husband, "for they themselves say that, while their field labor employs them at most six weeks in the year, that of the men continues the whole year round. Neither creeks nor rivers, whether shallow or deep, frozen or free from ice, must be an obstacle to the hunter, when in pursuit of a wounded deer, bear, or other animal; as is often the case. Nor has he then leisure to think on the state of his body, and to consider whether his blood is not too much heated to plunge without danger into the cold stream, since the game he is in pursuit of is running off from him with full speed. Many dangerous accidents often befall him, both as a hunter and a warrior (for he is both), and are seldom unattended with painful consequences, such as rheumatism, or consumption of the lungs, for which the sweat-house, on which they so much depend, and to which they often resort for relief, especially after a fatiguing hunt or warlike expedition, is not always a sure preservative or an effectual remedy."

Heckewelder also says that, if the sick squaw longed for an article of food, be it what it may or however difficult to procure, the husband

would at once endeavor to get it for her, and that he knew of instances where the husband would go forty or fifty miles for a mess of cranberries to satisfy his wife's longing.

Speaking of the Indians' cruelty to their enemies, Heckewelder says:

"The Indians are cruel to their enemies! In some cases they are, but perhaps not more so than white men have sometimes shewn themselves. There have been instances of white men flaying or taking off the skin of Indians who had fallen into their hands, and then tanning those skins, or cutting them in pieces, making them into razor-straps, and exposing those for sale, as was done at or near Pittsburg, sometime during the Revolutionary War. Those things are abominations in the eyes of the Indians, who, indeed, when strongly excited, inflict torments on their prisoners and put them to death by cruel tortures, but never are guilty of acts of barbarity in cold blood. Neither do the Delawares, and some other Indian nations, ever, on any account, disturb the ashes of the dead."

Contrary to the general supposition, the Indian was not cruel by nature according to some reliable authorities. His cruelty was confined to the times when he was on the war path; and even then, there is no record of his having committed a deed as disgusting, revolting and horrible as the murder of the ninety-six Christian Delawares, at Gnadenhutten, Ohio, on the eighth of March, 1782, by Colonel David Williamson and his band of Scotch-Irish settlers from Washington County, Pennsylvania.

During the long Indian wars, in Pennsylvania, from 1755 to 1795, hundreds of white persons, captured by the Indians, were adopted into Indian families, to take the places mostly of warriors who had fallen on the field of the slain. These captives, so adopted, were treated with great kindness, and were looked upon by the Indians as their own flesh and blood. Many, indeed, were the instances of captives, recovered by the whites, who later returned to the forest homes of their Indian friends and adopted Indian relatives. Heckewelder speaks of the humanity and delicacy with which the Indians treated female prisoners whom they intended to adopt. The early Indian never captured women, white or red, for immoral purposes.

In 1669, during the administration of Governor (Colonel) Francis Lovelace on the Delaware, an Indian was charged with the highest crime against woman. Dr. George P. Donehoo, whose fame

as a Pennsylvania historian is national, in commenting on this incident, says the following in his "Pennsylvania—A History":

"This is one of the few cases in American history, where such a crime was committed by an Indian. The author is not aware of any other case in all the history of Pennsylvania. During all the period of the border wars, when white women were captured by the hundreds and carried as prisoners to the villages on the Ohio and its tributaries, there is not recorded a single case where such a crime was committed by an Indian. This is most unusual as the white traders were guilty of this crime in every Indian village from the Atlantic to the Mississippi. The Indian imitated the white man in all his vices but this one. He would put his female captives to the utmost torture at the stake, adopt them as sisters or marry them. But the Indian never has been charged with this crime against womanhood in all the history of America."

To Dr. Donehoo's statement, Mr. Sipe adds that:

"if there had been a single instance of the Indian's having committed the crime against womanhood during the long period of the Indian wars in Pennsylvania, the Pennsylvania frontiersmen, who hated him with such burning rancor, would have been glad to make a record of it."

To Dr. Donehoo's statement, Mr. Sipe also adds:

"that the Indians learned no lessons in morality from the many of those high in the councils of the Colonies and of the British Government. They certainly learned no such lessons from Sir William Johnson, Indian Agent of the Crown—a voluptuary, free-lover, libertine and landgrabber, who, by Caroline Hendrick, daughter of Chief Hendrick of the Mohawks, also by Molly Brant, sister of the noted Mohawk chief, Joseph Brant, and by many other Indian women, some of them mere maidens, became the father of a numerous half-breed progeny, estimated from several score to one hundred."

The fiercest passion in the Indian's wild heart was the love of revenge, but, on the other hand, he would give his life for the protection of a friend. There was none more constant and steadfast as a friend. He would share his last morsel with the stranger within his gates. He was the noblest type of primitive man that ever trod the

earth. Among the children of men there were none who could equal him in power of endurance and capacity for suffering. He could travel on foot for days without food. He could be tortured to death by fire without a groan escaping his lips, and he chanted his death song with his last breath.

Says Heckewelder, speaking of the Delawares or Lenni Lenape:

"They will not admit that the whites are superior beings. They say that the hair of their heads, their features, the various colours of their eyes, evince that they are not like themselves Lenni-Lenape, an *Original People*, a race of men that has existed unchanged from the beginning of time; but they are a *mixed* race, and therefore, a troublesome one. Wherever they may be, the Great Spirit, knowing the wickedness of their disposition, found it necessary to give them a great Book, and taught them how to read it, that they might know and observe what he wished them to do and abstain from. But they, the Indians, have no need of any such book to let them know the will of their Maker; they find it engraved on their own hearts; they have had sufficient discernment given to them to distinguish good from evil, and by following that guide, they are sure not to err.

"It is true, they confess, that when they first saw the whites, they took them for beings of a superior kind. They did not know but that they had been sent to them from the abode of the Great Spirit for some great and important purpose. They therefore welcomed them, hoping to be made happier by their company. It was not long, however, before they discovered their mistake, having found them an ungrateful, insatiable people, who, though the Indians had given them as much land as was necessary to raise provisions for themselves and their families, and pasture for their cattle, wanted still to have more, and at last would not be contented with less than the *whole country*. 'And yet' say those injured people, 'these white men would always be telling us of their great Book which God had given to them; they would persuade us that every man was good who believed in what the Book said; and every man was bad who did not believe in it. They told us a great many things, which, they said, were written in the good Book, and wanted us to believe it all. We would probably



(Photo by Walter Jack)

Viaduct Over Mill Creek, Erie, Showing the "Old French Road" of 1753

have done so, if we had seen them practise what they pretended to believe, and act according to the good words which they told us. But no! While they held their big Book in one hand, in the other, they had murderous weapons, guns and swords wherewith to kill us, poor Indians. Ah! and they did so, too; they killed those who believed in their Book, as well as those who did not. They made no distinction!"

Having seen that the Indian had many virtues, it is but fair to add that many of these virtues were broken down by the white man. We refer particularly to the ruin wrought among the Indians by the white man's rum and vices. The Indian knew neither rum nor shameful diseases until his contact with the white man. Hear Heckewelder:

"So late as about the middle of the last century (the eighteenth century), the Indians were yet a hardy and healthy people, many very aged men and women were seen among them, some of whom thought they had lived about one hundred years. They frequently told me and others that, when they were young men, their people did not marry so early as they did since, that even at twenty they were called boys, and durst not wear a breech-clout, as the men did at that time, but had only a small bit of skin hanging before them. Neither, did they say, were they subject to so many disorders as in later times, and many of them calculated on dying of old age. But since that time, a great change has taken place in the constitution of those Indians who live nearest to the whites. By the introduction of ardent spirits among them, they have been led into vices which have brought on disorders which, they say, were unknown before; their blood became corrupted by a shameful complaint, which, they say, they had never known or heard of until the Europeans came among them. Now the Indians are affected with it to a great degree; children frequently inherit it from their parents, and after lingering for a few years, at last die victims to this poison. *Our vices have destroyed them, more than our swords.*

"The general prevalence of drunkenness among the Indians is, in a great degree, owing to the unprincipled white traders, who persuaded them to become intoxicated that they may cheat them the more easily, and obtain their lands or peltries for a mere trifle. Within the last fifty years, some instances have even come to my knowledge of white men having enticed

Indians to drink, and when they were drunk, murdered them. The effects which intoxication produces upon the Indians are dreadful. It has been the cause of an infinite number of murders among them. I cannot say how many have died of colds and other disorders, which they have caught by lying upon the cold ground, and remaining exposed to the elements, when drunk; others have lingered out their lives in excruciating rheumatic pains and in wasting consumptions until death came to relieve them of their sufferings. I once asked an Indian at Pittsburg, whom I had not seen before, who he was. He answered in broken English: 'My name is Blackfish; when at home with my nation, I am a clever fellow, and when here, a *hog*.' He meant that by means of the liquor which the white people gave him, he was sunk to the level of that beast."

Heckewelder says that reflecting Indians keenly remarked "that it was strange that a people who professed themselves believers in a religion, revealed to them by the Great Spirit himself; who say that they have in their houses the Word of God and his laws and commandments textually written, could think of making a beson (liquor), calculated to bewitch people and make them destroy one another."

Heckewelder's observations concerning the English traders are the sad truth, says Mr. Sipe:

"They took advantage of the Indians' inordinate appetite for rum; they cheated them out of their skins and furs; they debauched their women. The Pennsylvania Assembly, in a letter to Governor Hamilton, February 27th, 1754, characterized the traders as 'the vilest of our own inhabitants and convicts imported from Great Britain and Ireland.' The traders of other Colonies, many of whom entered Pennsylvania, were no better than the Pennsylvania traders. Said Governor Dinwiddie, of Virginia, in a letter to Governor Hamilton, of Pennsylvania, May 21st, 1753: 'The Indian traders, in general, appear to me to be a set of abandoned wretches.' In a word, the English traders, with few exceptions, were a vile and infamous horde, who, instead of contributing to the betterment of the Indian, corrupted and debauched him."

Since it had been the custom of England to empty her prisons of her lowest type of criminals and ship them to America, these derelicts of society had an important part in corrupting the Indians.

Rum was the curse of the Red Man, and the leading Indian chiefs recognized it as such. Hence, from the very beginning of the rum traffic among the Pennsylvania Indians, we find a series of protests by their chiefs to the Pennsylvania authorities. When the Conestoga or Susquehanna chief, Oretyagh, with a number of other chiefs of the Conestogas and Shawnees, bade farewell to William Penn, on October 7, 1701, just a short time before Penn left his Province never to return, this sachem, in the name of the rest, told him that the Indians had long suffered from the ravages of the rum traffic, and Penn informed Oretyagh and associate chiefs that the Assembly was at that time enacting a law, according to their desire, to prevent their being abused by the selling of rum among them. (Pa. Col. Rec., Vol. II, page 141.) Penn early saw the degradation which the Indian's unquenchable thirst for strong drink wrought among them, and he did all in his power to remedy the matter. But the law was no sooner enacted than it was disregarded by the traders. Then, in the minutes of a council held at Philadelphia, on May 16, 1704, we read the last reference to Oretyagh in recorded history, a protest against the rum traffic as follows:

"Oretyagh, the chief now of Conestoga, requested him (Nicole Godin, a trader) to complain to the Governor (John Evans) of the great quantities of rum continually brought to their town, insomuch that they (the Conestogas) are ruined by it, having nothing left, but have laid out all, even their clothes for rum, and may now, when threatened with war, be surprised by their enemies, when besides themselves with drink, and utterly be destroyed." (Pa. Col. Rec., Vol. II, page 141.)

The great Shikellamy, the most renowned Indian that ever lived in Pennsylvania, shortly after taking up his residence on the Susquehanna, as vice-regent of the Six Nations over the Delawares, Shawnees and other Indians in the eastern part of Pennsylvania, served notice on the Colonial Authorities that, if the rum traffic among the Indians were not better regulated, friendly relations between the Six Nations and the Colony of Pennsylvania would cease.

The Shawnees, who entered eastern Pennsylvania as early as 1694, began, about 1724 to 1727, to migrate to the valleys of the Ohio and Allegheny. One of the reasons why they migrated to the western part of the State, was to escape the ruinous effects of strong liquor. But the trader with his rum followed them into the forests of their western homes.

Then the Shawnee on the Conemaugh, Kiskiminetas and Allegheny took steps, in 1738, to restrain this pernicious traffic. On March twentieth of that year, three of their chiefs in this region, namely: "Loyporcowah (Opessah's Son), Newcheconneh (Deputy King) and Coycacolenne, or Coracolenne (Chief Counsellor)," wrote a letter to Thomas Penn and James Logan, Secretary of the Provincial Council, in which they acknowledged the receipt of a present from Penn and Logan of powder, lead and tobacco, delivered to them by the trader, George Miranda; in which they say they have a good understanding with the French, the Five Nations, the Ottawas, and all the French Indians; that the tract of land reserved for them by the Proprietary Government on the west side of the Susquehanna does not suit them at present; and that they desire to remain in the region of the Allegheny and Kiskiminetas, make a strong town there, and keep their warriors from making war upon other nations at a distance. They then add:

"After we heard your letter read, and all our people being gathered together, we held a council together, to leave off drinking for the space of four years. . . . There was not many of our traders at home at the time of our council, but our friends, Peter Chartier and George Miranda; but the proposal of stopping the rum and all strong liquors was made to the rest in the winter, and they were all willing. As soon as it was concluded of, all the rum that was in the towns was staved and spilled, belonging both to Indians and white people, which in quantity consisted of about forty gallons, that was thrown in the street; and we have appointed four men to stave all the rum or strong liquors that is brought to the towns hereafter, either by Indians or white men, during the four years."

A pledge signed by ninety-eight Shawnees and the two traders above mentioned accompanied this letter, agreeing that all rum should be destroyed, and four men appointed in every town to see that no strong liquor should be brought into the Shawnee towns for the term of four years. (Pa. Archives, Vol. I, pages 549-51.)

Previous to this action on part of Loyporcowah and other chiefs of the Shawnees, the Delawares at Kittanning made complaints concerning the rum traffic. In 1732 the trader, Edmund Cartlidge, wrote the Governor from Kittanning that the chiefs there made reflections on the government for permitting such large quantities of rum to be carried to the Allegheny and sold to the Indians at that place, con-

trary to law. Also, in 1733, the Shawnee chiefs in the Allegheny region wrote to the Governor requesting that he send them an order permitting them "to break in pieces all kegs of rum so brought yearly and monthly by some new upstart of a trader without a license, who comes amongst us and brings nothing but rum, no powder, nor lead, nor clothing, but takes away with him those skins which the old licensed traders who bring us everything necessary, ought to have in return for their goods sold us some years since." Also in 1734 the Shawnee chiefs at Allegheny wrote the Governor and requested that none of the licensed traders be allowed to bring them more than thirty gallons of rum twice in a year, except Peter Chartier, who "trades further than ye rest."

Also, the able Indian orator and wise counselor, Scaroudy, later successor to Tanacharison, the Half King, protested to the Pennsylvania Commissioners at the Carlisle Conference of October, 1753, as follows:

"Your traders now bring scarce any thing but Rum and Flour. . . . The Rum ruins us. We beg you would prevent its coming in such quantities by regulating the traders. . . . When these Whiskey Traders come, they bring thirty or forty Caggs (kegs) and put them down before Us and make Us drink, and get all the Skins that should go to pay the Debts We contracted for Goods bought of the Fair Traders, and by these means we not only ruin Ourselves but them too. These wicked Whiskey Sellers, when they have once got the Indians in Liquor, make them sell the very Clothes from their Backs. In short, if this Practice be continued, We must inevitably be ruined. We most earnestly, therefore, beseech You to remedy it." (Pa. Col. Rec., Vol. V, page 676.)

The whiskey traders were not checked. They continued their work unabated, in spite of the solemn protestations of the Indian chiefs and in spite of the protestations of such good white men as Conrad Weiser, who, on November 28, 1747, wrote the Provincial Council of Pennsylvania characterizing the havoc wrought among the Pennsylvania Indians as "an abomination before God and man." (Pa. Col. Rec., Vol. V, page 167.)

What has thus far been said relates principally to the Pennsylvania Indians. Let us, therefore, hear the testimony of a great Indian chief whose tribe did not inhabit Pennsylvania, the brave and saga-

cious Huron chief, Adario, who was gathered to his fathers in 1701. Out of the past comes the voice of Adario:

"As for the maple-water that we drink, 'tis sweet, well tasted, healthful, and friendly to the stomach, whereas your wine and brandy destroy the natural heat, pall the stomach, inflame the blood, intoxicate and create a thousand disorders. A man in drink loses his reason before he is aware, or, at least, reason is so drowned that he is not capable of distinguishing what he ought to do." When told that God had sent the Europeans to America to save the souls of the Indians, this great Huron chief replied that it was more likely that God had sent the Europeans to this continent to learn to be good; "for," said he, "the innocence of our lives, the love we tender to our brethern, and the tranquility of mind which we enjoy in contemplating business to our interest, these, I say, are the three great things that the Great Spirit requires of all men in general. We practice all these things in our villages naturally; while the Europeans defame, kill, rob, and pull one another to pieces, in their towns. Your money is the father of luxury, lasciviousness, intrigues, tricks, lying, treachery, falseness, and, in a word, all the mischief in the world. . . . Consider this and tell me if we are not right in refusing to finger it, or so much as look upon the cursed metal, since all these evils caused by it are unknown to us. . . . All our actions are guided by justice, equity, charity, sincerity and true faith. . . . Using bad language and cursing the Great Spirit were never heard among us."

As we picture in our minds the native Indians, a primitive people, simple-minded, romantic children of nature, who, free from care and worldly gain, roamed without restraint the great valleys, forests, prairies and mountains of this broad land and we contemplate upon the well established habits, customs and natural inclinations of these people, the sound moral philosophy by which they were guided, according to repeated declarations of their chiefs and, unfortunately, which is not the guiding force of so many of our people of today; as we recall how these simple people welcomed the early European settlers, gave them of their land, taught them how to provide for their needs in the land strange to them, how to guard themselves from the dangers of the forest, nursed them when overtaken by illness and, although ignorant of the Christian religion, really did practice the



(Photo by Walter Jack)

Boundary Monument at Southwest Corner of New York State

virtues of charity, justice and brotherly love in their simple but sincere manner and, then, we consider the well authenticated records of how the early Europeans who came to this continent, invading the natural home of the Indians, despite the civilization and culture of centuries in Europe, treated the Indians, murdering them in their lust for gain, violating the chastity of their women, cheating them in trade, debauching them with liquor and inflicting upon them the vices of the white man previously unknown to the Indian, we must be charitable and just in our characterization of the Indian. The Indian, as all other mortal creatures, had his faults of course and many transgressions may justly be laid at his door, but we must wonder to what extent the early white settlers and traders were responsible for his delinquencies and misdeeds, even though the influence of Christianity should have inspired them to extend charity to these innocent people, sons of the Great Creator, the Author of all life and the Giver of all good and perfect gifts, and to have taught and guided them in harmony with the Christian religion.

Much praise is due the early missionaries, who labored so zealously and untiringly among the Indians, as well as many virtuous white laymen, who endeavored to guide them into the proper paths. But human nature is weak and appears to be more susceptible to bad influence than to good. The world also hears more often of the bad in men than of the good and, no doubt, a great number of the Indians were safely guided to well ordered and useful lives, as the result of the self-sacrificing labors of pious Christian people.

It is worthy of note that there was a considerable difference in the objectives of the early French and the English who came to these shores. Although, of course, both interested in trade and particularly in the great fur trade, the French were also active and sincerely so, in their efforts to establish the Christian religion among the natives, while the English were more mercenary and bent upon colonization.

It has been said by some writers that the American Indians were exterminating each other by aggressive and devastating wars, before the white people came among them. But wars are not proofs of barbarity. The bravest warrior was he whom they most honored; but this has been true of Christian nations; and those who call themselves Christians have not ceased to look upon him who could plan and execute most successfully the wholesale slaughter of human beings, as the most deserving of his country's laurels.

It has also been said that the Indian was cruel to the captive, and inflicted tortures upon his enemy taken in battle. But from what we

know about them, it is not inferred that Indian chiefs were ever guilty of filling dungeons with innocent victims or slaughtering hundreds and thousands of their own people, whose only sin was a quiet dissent from some religious dogma. Towards their foes they were often relentless, and they had good cause to look upon the white men as their enemies.

Again, it has been said, the Indian mode of warfare is, without exception, the most inhuman and revolting. But those who die even from the barbed and poisoned arrow, do not suffer greater pangs or linger in more unendurable torments, than those who are mangled with powder and balls. The tomahawk makes quick work of the dying, but the scene is scarcely as revolting as the civilized battlefield, where thousands of wounded and mangled victims lie in great heaps over the ground, filling the air with groans for days until the slower process of death ends their suffering. As for scalping, it is not exclusively an Indian invention. Prescott says, "It claims high authority, or, at least, antiquity. The father of history, Herodotus, gives an account of it among the Scythians, showing that they performed the operation, and wore scalps of their enemies taken in battle, as trophies, in the manner as of North American Indians. Traces of the same custom are also found in the laws of the Visigoths, among the Franks, and even the Anglo-Saxons."

The science of warfare was the highest accomplishment of the Indian, but as is the case with other people, a spirit of aggression was only indulged by the stronger nations, to whom alone it was of any advantage. Of this, we have a striking example in the present wars in Europe and Asia. Like hunted deer, the poorer and less powerful tribes were often forced to leave their villages as plunder to some marauding band on a foray from a distant locality, as the weaker nations of Europe have so recently been forced to do.

The preparation for the warpath was commonly opened by feasting and dancing, in which the whole tribe took part, and when this was concluded, the war party quickly and silently left the village and entered the forest, with the chief at their head, and the warriors following singly in "Indian file." The war dance so often alluded to in Indian story, is said to have been beyond description the most exciting and inspiring of all theatrical scenes. It was the acting of war. The song, which kindled enthusiasm, was first sung, with the same motive and the same effect as the martial music awakens its echo on Christian plains, and then follows all the pomp and circumstance of war; arrows would fly thick and fast, the tomahawk was wielded, the dead and dying covered the battlefield, and by various devices of paint and

false scalps, hundreds were bleeding, then followed the shout of victory and the dirge for the slain. Those who have witnessed it represent it as impossible for one who is not an actor to realize that it can be anything less than a real battle. Those who have passed through the initiatory process of being trained for warriors at a military school, can imagine and best appreciate the influence of the war dance upon those to whom war is the only field of glory.

The Senecas of Pennsylvania mixed their war paint with petroleum, which they obtained from the oil springs of Venango County. It is said to have given them "a hideous, glistening appearance"; adding permanency to the paint, and rendering it impervious to water.

Among the Iroquois, revenge for a great injury was usually the cause of the beginnings of strife, and their subjugation for the sake of peace, like the Romans of old, was the principle upon which they waged war. There was something in their proud and dignified bearing, in their national policy, and their warlike exploits like the people who extend their arms into every civilized and uncivilized land.

To be taken captive by the Indians was, among the early colonists, considered the most terrible of calamities; it was indeed a fearful thing to become the victim of their revenge. But those who were enduring the actual sufferings of captives, or suffering still more from uncertain evils, thought little of the provocation given by our own people. The innocent often suffered for the guilty, and the unprincipled marauders of the frontier committed depredations and acts of atrocity which aroused the spirit of revenge, and drove the Indian to retaliation. Thinking pale-faces were all alike, he did not wait until the real offender fell into his hands. We do not desire to paint him so that he will become attractive to civilized people, and there is no need of painting him more hideously than he paints himself.

As regards their possession of qualities essential to success in war, or the chase, very false ideas have been entertained. It had been customary to think and speak of the Indian as immeasurably superior to all other human beings in endurance, skill in the use of weapons, and in woodcraft, and also possessing bravery and cunning which were almost supernatural; whereas it is a fact that the white man has invariably shown his superiority over the savage, wherever the two have been brought together in the same arena.

The Indian was brave so long as he had a shelter, from which he might attack his foe, but that courage offered a very marked diminution when he was compelled to meet his enemies, as white men do, on the open field, and without cover, and it is an undisputable fact that in

all the fights between the French and English in America, where Indian allies were engaged on one side or the other (and often on both) these red warriors, who were so ready and apt in using steel in the form of tomahawk, or scalping-knife, always blanched before the gleam of the bayonet.

It has been said that there has never been known an instance where any incentive of pride—of which the Indian was supposed to possess so much, or of savage vindictiveness, which we know was their marked characteristic, was found sufficient to hold them steadfast in the face of an advancing line of glistening steel.

And so it was in the science of woodcraft. Keen and cunning as they were in following their enemy's trail by the upturning of a leaf, or the bending of a twig or blade of grass, guiding their way in starless night, through the depths of trackless forests, by the sense of touch upon the trunks of trees, detecting the proximity of a foe by a knowledge apparently as keen as a bloodhound's scent, and falling upon that foe with steps as noiseless as the passage of disembodied spirits; in all these, the white man, whenever he made these things his study, rivalled and surpassed the savage. The story of that subtlest of all Indian haters, the Pennsylvanian, Captain Samuel Brady, and also that of Lewis Wetzel, the scout of the Ohio, are well known; how they swore to be avenged for the destruction of their houses and the slaying of their families by the savages, and how, single handed and alone, for months and years they shadowed the red murderers through the dim woods and along the darkly gliding streams, until their grudge had been glutted a hundred fold; though during that time whole tribes had bent all their energies and all their cunning to surprise and capture them; but in vain, for the white man was their superior. His eye was keener, his tread lighter, his senses more acute, his rifle more unerring.

Indian legend represents the manner in which the warrior met his death at the stake. No refinement or duration of torture could extort from him a groan. The faith of the Christian martyr supports him in the hour of trial; but the Indian excels him in defying his tormentors, with only his dauntless spirit to sustain him; he will die, too, rather than surrender, though he knows he will fall into the hands of those who, looking upon him as a fallen foe, will be merciful.

In the quality of fortitude alone, the Indian seemed to have been superior to the white man. In enduring pain with stoical indifference, he stood preëminent. To die, without betraying weakness or fear, was one of the highest virtues in his eye, and was early inculcated in the minds of the children. Many a savage, whom no sentiment of courage,

or pride, or shame, could have induced to face the terror of the bayonet on an open field, has chanted his death song with unquivering voice, while enduring tortures which would have wrung shrieks of agony from the sternest grenadier who preferred death to surrender upon the field of Waterloo.

In their councils they observed the utmost gravity and decorum. While the Indian orator addressed his audience, there was no interruption on their part, excepting from time to time, a guttural sound, something like "hoogh," expressing satisfaction at points in the speech, and although antagonistic views might be held on subjects under discussion, yet the most respectful attention was given to the words of the speaker during his oration, and neither his partisans nor opponents showed the least disposition toward that levity which, it is to be regretted, forms a very marked feature of the deliberative assemblies of the white race, even in our own houses of Congress at Washington.

At the deliberations of the "Long House" of the Iroquois' league, the oratory and eloquence were of a high order for an untutored and savage people, who had no written language, and no written literature. Their speaker's gestures were animated, and their speeches delivered in a loud voice. The effect upon an observer of an erect figure, naked arm, and rude, though not ungraceful attire of the orator, is described as very impressive.

By the authority of William Penn himself, we are told that "they speak little, but fervently and with eloquence. I have never seen more natural sagacity, considering them without the help (I was going to say the spoil) of tradition."

The matter of their discourse is found, in all the speeches which have been transmitted to us, to have been well adapted to the subject, their style varied, appropriate to the effect intended and we often find passages which embody the soul of eloquence.

In the impassioned utterances of Cornplanter, recorded in the pages of history, we find an impressive and effective style that excites our liveliest admiration, and in the annals of eloquence more fervid oratory is rarely found. The Senecas produced more orators than any other tribe. Cornplanter, Red Jacket, and Farmer's Brother, were all Senecas, and were all distinguished for their eloquence. It is true, that Red Jacket attained a higher reputation for eloquence than was ever enjoyed by Cornplanter. If one may judge, however, from the specimens of their eloquence that have come down to us, while we have

much to admire in both, we rather conclude that Red Jacket's superiority must have been more in manner than in matter.

The address delivered to General Washington, in Philadelphia, in 1790, though in the names of Great-tree, Half-town, and Cornplanter was undoubtedly dictated by the latter, and to him is due the credit, will bear comparison with any Indian speech on record. While not so declamatory as the ordinary Indian style, it is closely logical, and ranks as a rare specimen of impressive and effective oratory.



Pymatuning Reservoir, in Crawford and Mercer Counties, from the Air

We give a single extract from the speech referred to in this connection: "Father—When you kindled your thirteen fires separately, the wise men assembled at them told us that you were all brothers; the children of one Great Father, who regarded the red people as his children. They called us brothers, and invited us to his protection. They told us he resided beyond the great waters where the sun first rises; and that his goodness was as bright as the sun. What they said went to our hearts. We accepted the invitation, and promised to obey him. What the Seneca nation promises they faithfully perform. When you refused obedience to that King, he commanded us to assist his

beloved men in making you sober. In obeying him we did no more than yourselves had bid us to promise. We were deceived; but your people, teaching us to confide in that King, had helped to deceive us, and we now appeal to your breast. *Is all the blame ours?* You told us you could crush us to nothing; and you demanded from us a great country, as the price of that peace which you had offered us, *as if our want of strength had destroyed our rights.*"

Red Jacket, upon one occasion, thus pathetically broke forth in an enumeration of the woes which his tribe had sustained at the hands of the pale faces: "We stand on a small island, in the bosom of the great waters. We are encircled, we are encompassed. The Evil Spirit rides upon the blast, and the waters are disturbed. They rise, they press upon us, and the waters once settled over us, we disappear forever. Who, then, lives to mourn us? None! what marks our extinction? Nothing! We are mingled with the common elements."

Another specimen of Indian eloquence, of a high order, is recorded by the veteran missionary, Heckewelder, as having come under his own personal observation. It was the speech of Pipe, a Delaware chief, addressed to the British Commandant at Detroit. The chief and his men, at the time, were allies of the British, but it is represented that they were tired of the alliance and only continued in it under compulsion. This may or may not have been a mistake on the part of the good missionary whose recorded statements concerning the Indians, and particularly the Delawares, although always conscientiously made and intended to be strictly truthful, are always strongly, and often times ridiculously, biased in favor of the red men. But this is the account which he gives of the speech, and he vouches for the correctness of his rendition. Alluding to the chief, he says:

"He was now reluctantly compelled to go out against the Americans with the men under his command. On his return from one of these expeditions, he went to make his report to the British Commandant, at Detroit, by whom he was received in state, at the council house, in presence of a great number of Indians, British officers and others.

"There were several missionaries present, among which I was one. The chief was seated in front of his Indians, facing the commandant. He held in his left hand a human scalp, tied to a short stick. After a pause of some minutes he rose, and, addressing the Governor, delivered the following speech:

“ ‘Father!’ (Here the orator stopped and turning around to the audience with a face full of meaning, and a sarcastic look, which I should in vain attempt to describe, he went on in a lower tone of voice, as addressing himself to them.) ‘I have said *father*, although, indeed, I do not know why I am to call *him* so, having never known any other father than the French, and consider the English as only *brothers*. But as this name is also *imposed* upon us, I shall use of it and say’—(here he fixed his eyes on the commandant)—‘Father! some time ago, you put a war-hatchet in my hands, saying: Take this weapon and try it upon the heads of my enemies, the *long-knives*, and let me afterwards know if it was sharp and good.

“ ‘Father! at the time when you gave me this weapon, I had neither cause nor inclination to go to war against a people who had done me no injury; yet, in obedience to you, who say you are my father, and call me your child, I received the hatchet, well knowing that if I did not obey you would withhold from me the necessaries of life, without which I could not subsist, and which are not elsewhere to be procured but at the house of my father.

“ ‘Father! many lives have already been lost on *your* account. Nations have suffered and been weakened. Children have lost parents, brothers, and relatives. Wives have lost husbands. It is not known how many may perish before *your* war will be at an end.

“ ‘Father! you say you love your children, the Indians. This you have often told them; and, indeed, it is for your interest to say so to them that you may have them at your service.

“ ‘Father! who of us can believe that you can love a people of a different color from your own, better than those who have a white skin like yourselves?

“ ‘Father! pay attention to what I am going to say. While you, Father, are setting me on your enemy, much in the same manner as a hunter sets his dog on the game, while I am in the act of rushing on that enemy of yours with the bloody destructive weapon you gave me, I may perchance happen to look back to the place whence you started me, and what shall I see? Perhaps I shall see my father shaking hands with the *long-knives*; yes, with those very people whom he now calls his

enemies. I may then see him laugh at my folly for having obeyed his orders, and yet I am risking my life at his command. Father! keep what I have said in remembrance.

“ ‘Now Father! this is what has been done with the hatchet you gave me (handing the stick with the scalp); I have done with the hatchet what you ordered me to do, and have found it sharp. Nevertheless, I did not do all that I might have done. No, I did not; my heart failed within me, I felt compassion for your enemy. Innocence had no part in your quarrels, therefore I distinguished—I spared—I took some *live flesh*,* which, while I was bringing to you, I spied one of your large canoes, on which I put it for you. In a few days you will receive this, and will *find that the skin is of the same color as your own*. Father! I hope you will not destroy what I have saved. You Father, have the means of preserving, what with me would perish for want. The warrior is poor and his cabin is always empty, but your house, Father, is always full.’ ”

The venerable missionary adds: “Here we see boldness, frankness, dignity, and humanity, happily blended together, and most eloquently displayed.” I wish I could convey to the reader’s mind only a small part of the impression which this speech made on me, and on all present, when it was delivered.

Taciturn and dignified as was the Indian, however, he not infrequently showed a considerable disposition to be facetious and witty. It is related of Tadeuskund, the principal chief, and sometimes spoken of as “king” of the Delawares, that being seen one day sitting on the pavement in Market Street, Philadelphia, in a state of intoxication, for he dearly loved the fiery rum, he was accosted by a Quaker who knew him. “Ah, chief, how is this; I thought thee was turned a good Moravian?” The fuddled “king” replied, “Ugh, chief no Moravian now, chief turned Quaker yesterday.” And upon another occasion, being met by a Scotchman, a worthless fellow, who hailed him with, “Well cousin, how do you do?” The proud red man responded, “Cousin, cousin, how do you make that out?” “Oh,” said the Scot, “we are all cousins from Adam.” “Ah, then,” said the chief, “I am very glad it is no nearer.”†

Concerning this trait, Heckewelder says: “They are ingenious in making satirical observations which, though they create laughter, do

*Women and children prisoners.

†Stone’s History of Wyoming.

not, or but seldom give offense. For instance, seeing a bad hunter going into the woods with his gun, they will ask him if he is going out for meat, or say to one another, 'now we shall have meat, for such a one has gone hunting,' not believing any such thing. Or, if they see a coward joining a war party, they will ask him ironically at what time he intends to come back, knowing that he will return before he has met the enemy, or, they will say to one another, 'will he return this way with his scalps?' "

Reference has already been made to the respect of the Indians for old age. On this subject, Heckewelder says the following:

"They are remarkable for the particular respect which they pay to old age. In all their meetings, whether public or private, they pay the greatest attention to the observations and advice of the aged. No one will attempt to contradict them, nor to interfere, in any manner, or even speak, unless he is especially called upon. 'The aged,' they say, 'have lived through the whole period of our lives, and long before we were born. They have not only all the knowledge which we possess, but a great deal more. We, therefore, must submit our limited views to their experience.'

"In traveling, one of the eldest will always take the lead, unless another is especially appointed for the purpose. If such a one stops to hunt, or in order to stay and encamp at the place for some time, all halt together, all are pleased with the spot, and declare it to be judiciously chosen.

"On every occasion, and in every situation through life, age takes the lead among the Indians. Even little boys, when going on parties of pleasure, were it only to catch butterflies, strictly adhere to this rule, and submit to the direction of the oldest in their company, who is their chief, leader and spokesman. If they are accosted on the way by any person, and asked whither they are going, or any other question, no one will presume to answer but their speaker. The same rule is observed when they are grown up, and in no case whatever will one of a party, club, or meeting, attempt to assume authority over the leader, or even to set him right if he should mistake the road, or take a wrong course, much less will any one contradict what he says, unless his opinion should be particularly asked. In such case, and in no other, he will give his advice, but with great modesty and diffidence.

"Indeed, I have had sufficient reason to be convinced that this principle, excellent as it is in itself, is sometimes even carried too far by the Indians, and that not a little inconvenience is occasioned by it. A few instances will make this better understood than any explanation I could give.

"In the year 1765, the great body of Christian Indians, after having remained sixteen months at and near Philadelphia, were permitted to return to their country, peace having been concluded with the Indian nations, who still continued at war, notwithstanding the pacification between the European powers.

"They resolved to open a path through the wilderness, from the frontier settlements beyond the Blue Mountains, directly to Wyoming, on the Susquehanna. This path they laid off and cut, as they proceeded, two, three, or four miles at a time, according to the nature of the ground and the convenience of water, bringing up their baggage by making two or more trips, as they had no horses to carry it. Having arrived at the Great Pine Swamp, then supposed to be about fourteen miles wide, it was found very difficult to cut a passage, on account of the thickets and of the great number of fallen trees which encumbered it; they were, besides, unacquainted with that part of the country. Several old men, however, took the lead and undertook to be their guides. After a tedious march of near two weeks, attended with much labor, they brought the party across the swamp to the large creek which borders it upon the opposite side. There they found a very steep mountain through which no passage could be found, either above or below.

"Discouraged at the prospect before them, they saw now no alternative but to return by the same way they had come, and take the route by Fort Allen to Nescopeck, and so up the Susquehanna to Wyoming, a distance of nearly one hundred miles round. In this difficulty it fortunately struck their missionary, Mr. Zeisberger, that a certain Indian named David, who was one of their party, and had followed them all the way, was acquainted with that part of the country, and might, perhaps, be able to point out to them some better and shorter road. He soon found that he was not mistaken, David was perfectly acquainted with the country and knew a good road through which the party might easily pass; but not having

been questioned on the subject, had hitherto kept silence, and followed with the rest, though *he knew all the while they were going wrong.*

"A dialogue then took place between him and the missionary.

"Zeisberger—'David, you are acquainted with this country, perhaps you know a better road and a shorter one than that which we are going to take?'

"David—'Yes, I do, there is such a course which we may easily get through, and have a much shorter distance to travel.'

"Z.—'What, David; we are all going wrong, and yet you are with us?'

"D.—'Yes it is so.'

"Z.—'And yet you said nothing, and followed with the rest, as if all had been right?'

"D.—'Yes, the guides are older than I, they took the lead, and never asked me whether I had any knowledge of the country. If they had inquired, I would have told them.'

"Z.—'Will you now tell them?'

"D.—'No, Indeed; unless they ask me. It does not become an Indian to instruct his elders.'

"At the instigation of Mr. Zeisberger, the question was then asked him, when he immediately told them they must all return to a certain spot, six miles back, and then direct their course more to the northeast, which would bring them to a gap in the mountain, where they could pass through with great ease. They did so, and he followed them, and being now desired to take the lead, he did it, and brought them to the very spot he had described, and from thence led them all the way to Wyoming. This difficult part of the road in the swamp has been since called David's Path, and the State road now passes through it."

This anecdote was told me by Mr. Zeisberger, himself, whom I have never known to say anything which was not strictly true. I, therefore, give it full credit, the more so, as I have myself witnessed two similar instances.

"The first happened in the year 1791. I had parted by accident from the company I was with, and lost my way in the woods. I had with me an Indian lad about twelve or thirteen years of age, and wished him to take the lead, to which, how-

ever, he would not consent. We were at last found by our party, who had gone in search of us. I complained to them of the boy for not doing what I had bidden him; but they answered that he had done right, and 'that it did not become a boy to walk before a man, and be his leader.'

"The second occurrence of the like kind took place in the year 1798. I was on a journey with two young Indians round the head of Lake Erie. Neither of these Indians having ever



State Nursery for Reforestation, Elliott State Park, Between DuBois and Clearfield

been in the country we were going to, they received their instructions of others before their departure. The leader, however, having once mistaken a path, we traveled several miles in a wrong direction, until at last I discovered the mistake by our having Owl Creek on our left, when we ought to have had it to our right. I observed this to Christian, the young Indian in the rear, who coinciding with me in opinion, I desired him to run forward to the leader, who was far ahead of us, and to bring him back; but the lad answered that he could not do it. I asked him the reason. 'It is,' said he, 'because I am younger than he is.' 'Will you then,' replied I, 'take my message to him, and tell him that I desire him to return to this place,

where I will wait for him?' The young man immediately consented, went forward to the leader and brought him back, upon which we took an eastward course through the woods to Owl Creek, and after crossing it fell into our right path."*

The same writer also speaks of filial affection and respect among the Indian tribes, and having particular reference to those of the Lenni Lenape, as follows:

"It is a sacred principle among the Indians, and one of those moral and religious truths which they always have before their eyes, that the Great Spirit, who created them and provided for them so abundantly with the means of subsistence, made it the duty of parents to maintain and take care of their children until they should be able to provide for themselves, and that having, while weak and helpless, received the benefits of maintenance and protection, they are bound to repay them by a similar care of those who are laboring under the infirmities of old age and are no longer able to supply their own wants.

"Thus a strong feeling of gratitude towards their elders, inculcated and cherished from their earliest infancy, is the solid foundation on which rests that respect for old age for which Indians are so remarkable, and it is further supported by the well-founded hope of receiving the like succors and attentions, in their turn, when the heavy hand of time shall have reduced them to the same helpless condition which they now commiserate in others, and seek, by every means in their power, to render more tolerable. Hence, they do not confine themselves to acts of absolute necessity; it is not enough for them that the old are not suffered to starve with hunger or perish with cold, but they must be made, as much as possible, to share in the pleasure and comforts of life. It is, indeed, a moving spectacle to see the tender and delicate attentions which, on every occasion, they lavish upon the aged and decrepit persons. When going out hunting, they will put them on a horse or in a canoe, and take them into the woods to their hunting grounds, in order to revive their spirits by making them enjoy the sights of a sport in which they can no longer participate. They place them in particular situations where they are sure that the game they are in pursuit of will pass by, taking proper

*Extract from "History, Manners and Customs of the Indian Nations."

measures, at the same time, to prevent its escape, so that their aged parents and friends may, at last, as our sportsmen call it, *be in at the death*. Nor is this all; the hoary veterans must all enjoy the *honors* of the chase. When the animal thus surrounded is come within reach of their guns, when every possibility of escape is precluded, by the woods all around being set on fire, they all, young and old, fire together, so that it is difficult to say whose ball it was that brought the animal to the ground. But they are never at a loss to decide, and always give it in favor of the oldest men in the party. So, when the young people have discovered a place where the bears have their haunts, or have resorted to for the winter, they frequently take with them, to the spot, such of the old men as are yet able to walk or ride, where they not only have an opportunity of witnessing the sport, but receive their full share of the meat and the oil.

"At home the old are as well treated and taken care of as if they were favorite children. They are cherished and even caressed; indulged in health and nursed in sickness; and all their wishes and wants are anticipated. Their company is sought by the young, to whom their conversation is considered an honor. Their advice is asked on all occasions; their words are listened to as oracles, and their occasional garrulity, nay, even the second childhood, often attendant on extreme old age, is never, with Indians, a subject of ridicule or laughter. Respect, gratitude, and love are too predominant in their minds to permit any degrading idea to mix itself with these truly honorable and generous feelings.

"And yet there have been travelers who have ventured to assert that old people among the Indians are not only neglected and suffered to perish for want, but that they are even, when no longer able to care for themselves, *put out of the way of all trouble*. I am free to declare that among all the Indian nations that I have become acquainted with, if any one should kill an old man or woman, for no other cause than that of having become burdensome to society, it would be considered as an unpardonable crime; the general indignation would be excited, and the murderer instantly be put to death. I cannot conceive any act that would produce such an universal horror and detestation. Such is the veneration which is everywhere felt for old age."

Among the customs, or indeed common laws of the Indians, one of the most remarkable and interesting was the *adoption* of prisoners. This right belonged more particularly to the females than to the warriors of the tribes. It was common for a mother to claim, from among the captives, one whose life should be spared, and who should, by adoption, fill the place in her household of her son who had fallen in battle.

It was well for the unfortunate prisoners, that this election depended more on the voice of the mother than on that of the father, as innumerable lives were thus spared, of those whom the warriors, if left to their own desires, would have immolated. When once adopted, if the captives assumed a cheerful aspect, entered into their mode of life, learned their language, and, in brief, acted as if they actually felt themselves adopted, all hardship was removed, except such as was inseparable from the Indian mode of life.

Although the right was most frequently exercised by mothers to fill the places of their sons who had been slain, yet the privilege of adoption was often extended to female prisoners. The following is a case in point, extracted from Mark Bancroft's account of the surprise and capture of the Gilbert family, near the later site of Weissport, in the year 1780. Speaking of this custom of adoption, he says:

"But if this change of relation operated as an amelioration of the condition in the life of the prisoner, it rendered ransom extremely difficult in all cases, and in some instances precluded it altogether. These difficulties were exemplified in a striking manner in the person of Elizabeth Gilbert.

"This girl only twelve years of age when captured, was adopted by an Indian family, but afterwards permitted to reside in a white family of the name of Secord, by whom she was treated as a child indeed, and to whom she became so much attached as to call Mrs. Secord by the endearing title of *Mamma*. Her residence, however, in a white family, was a favor granted to the Secords by the Indian (adopted) parents of Elizabeth, who regarded and claimed her as their child.

"Mr. Secord, having business at Niagara, took Betsy—as she was called—with him, and there, after long separation, she had the happiness to meet six of her relations, most of whom had already been released and were preparing to set out for Montreal, lingering and yearning for those they seemed destined to leave behind perhaps for ever. The sight of their

beloved little sister roused every energy to effect her release, which desire was generously seconded by John Secord and Colonel Butler, who, soon after her visit to Niagara, sent for the Indian who claimed Elizabeth, and made overtures for her ransom. At first he declared that '*he would not sell his own flesh and blood*'; but, attacked through his interest, or, in other words, his necessities, the negotiation succeeded, and her youngest child was among the treasures first restored to the mother at Montreal."

Referring to the Indian custom, Heckewelder, with his usual lenity of judgment towards the savages, says:

"The prisoners are generally adopted by the families of their conquerors in the place of lost or deceased relations or friends, where they soon become domesticated, and are so kindly treated that they never wish themselves away again. I have seen even white men who, after such adoption, were given up by the Indians in compliance with the stipulations of treaties, take the first opportunity to escape from their own country and return with all possible speed to their Indian homes."

But with all proper deference to the old missionary's statement, we are probably safe in believing that such instances of white men's devotion to the delights of Indian life are, to say the very least, exceedingly rare.

In their intercourse with the Indians, the white people were thoughtlessly trampling upon their religion, and their sacred rights. They were expected to look meekly on while the grave was robbed of its treasures, and the bones of their fathers were left to bleach upon the field. When exasperated by the cruel disrespect of their conquerors, and driven to deeds of vengeance, there was little appreciation of the motives which influenced them.

It was the Indian custom to bury with the dead their best clothing, and the various implements they had been in the habit of using while living. If it was a warrior, they placed his tomahawk by his side, and his knife in his shield; with the hunter, his bow and arrow, and implements for cooking his food; with the women, their kettles and cooking apparatus, and also food for all. Tobacco was deposited in every grave, for to smoke was an Indian's idea of felicity in the body and out of it, and in this there was not so much difference as there might be between them and gentlemen of white color.

Among the Iroquois, and many other Indian nations, it was the custom to place the dead upon scaffolds built for this purpose, from tree to tree, or within a temporary enclosure, and underneath a fire was kept burning for several days. Probably they had known of instances of persons reviving after they were supposed to be dead; and this led to the conclusion, that the spirit sometimes returned to animate the body, after it had once fled. If there were no signs of life for ten days, the fire was extinguished, and the body left unmolested, until decomposition had begun to take place, when the remains were buried.

In later years they allowed ten days for the flight of the spirit. Their period of mourning continued while the spirit was wandering; as soon as they believed it entered heaven, they commenced rejoicing that it had reached where happiness is eternal. Sometimes a piteous wailing was kept up for a long time, but it was only their own bereavement that they bewailed, as they had no fear about the fate of those who died. Not until they had heard of purgatory from the Jesuits, or of endless woe from the Protestants, did they look upon death with terror, or life as anything but a blessing.

In regard to their burial rites, the words of the poet who has given metrical beauty to their legends, and added his own to their lofty enthusiasm, will suffice:

"Poet and historian have lavished their descriptive skill on the burial rites of Alaric, whose bones repose in the sandy bed of the Busentinus, but not less imposing was the funeral of Blackbird, the Ohama Chief, who was inhumed bestriding his war-horse in a hill sepulchre that overlooks the Missouri."

A tribe has been known to visit the spot which had been, in former times, the burial place of their people, though long deserted, and spend hours in silent meditation, and not until every hope had apparently died in their bosoms, did they leave the sod which covered the dust of any of their kindred, to the footsteps of the stranger.

The Indians were most superstitious, believers in dreams and observers of omens: No enterprise was inaugurated, nor journey commenced by them, without consultation of signs and portents, and in the most ordinary operations of life, the planting of their maize, or the erection of their rude wigwams, critical attention was had to weather sign, and to the position and supposed influence of the moon. In this last-named peculiarity, however, they did not differ materially from many of our Pennsylvania farmers of later days.



(Photo by Walter Jack)

General Joseph Warren Statue at Warren

Of the incredible folly and weakness which, in this direction were universally exhibited by the otherwise self-reliant aborigines, the gentle Heckewelder thus discourses :

"Great and powerful as the Indian conceives himself to be, firm and undaunted as he really is, braving all seasons and weathers, careless of dangers, patient of hunger, thirst, and cold, and fond of displaying the native energy of his character, even in the midst of tortures, at the very thought of which our own puny nature revolts and shudders; this lord of the creation, whose life is spent in a state of constant warfare against the wild beasts of the forest and the savages of the wilderness, he who, proud of his independent existence, strikes his breast with exultation and exclaims, 'I am a man!'—the American Indian has one weak side which sinks him down to the level of the most fearful and timid being; a childish apprehension of an occult and unknown power which, unless he can summon sufficient fortitude to conquer it, changes at once the hero into a coward.

"It is incredible to what a degree the Indian's superstitious belief in witchcraft operates upon their minds. The moment that their imagination is struck with the idea that they are bewitched, they are no longer themselves; their fancy is constantly at work creating the most horrid and distressing images. They see themselves falling a sacrifice to the wicked arts of a vile unknown hand, of one who would not have dared to face in a fair combat, dying a miserable ignominious death, a death to which they would a thousand times prefer the stake with all its horrors. No tale, no tradition, no memorial of their courage or heroic fortitude, will go down with it to posterity; it will be thought that they were not deserving of a better fate. And (O! dreadful thought to an Indian mind) that death is to remain forever unrevenged; their friends, their relations, the men of their own tribe will seek the murderer in vain, they will seek him while perhaps he is in the midst of them unnoticed and unknown, smiling at their impotent rage, and calmly selecting some new victim to his infernal art.

"Of this extraordinary supposed power of their conjurers, of the causes which produce it, and the manner in which it is acquired the Indians, as may well be supposed, have not a very

definite idea. All they can say is, that the sorcerer makes use of a 'deadening substance,' which he discharges and conveys to the person whom he means to 'strike' through the air by means of the wind, or of his own breath, or throws at him in a manner which they can neither understand nor describe. The person thus *stricken* is immediately seized with an unaccountable terror, his spirits sink, his appetite fails, he is disturbed in his sleep, he pines and wastes away, or a sickness seizes him, and he dies at last a miserable victim to the workings of his own imagination.

"Such are their ideas and the melancholy effects of the dread they feel, of that supernatural power which they vainly fancy to exist among them. That they can destroy one another by means of poisonous roots and plants is certainly true, but in this there is no witchcraft. This prejudice which they labor under can be ascribed to no other than their excessive ignorance and credulity. I was once acquainted with a white man, a shrewd and correct observer, who had lived long among the Indians, and being himself related to an Indian family, had the best opportunities of obtaining accurate information on this subject. He told me that he had found the means of getting into the confidence of one of their most noted sorcerers, who had frankly confessed to him that his secret consisted in exciting fear and suspicion, and creating in the multitude a strong belief in his magical powers. 'For,' said he, 'such is the credulity of many, that if I pick a little wool from my blanket and roll it between my fingers into a small round ball, not larger than a bean, I am by that alone believed to be deeply skilled in the magic art and it is immediately supposed that I am preparing the deadly substance with which I mean to strike some person or other, although I hardly know myself at the time what my fingers are doing; and if at that moment I happen to cast my eyes on a particular man, or even to cast a side glance at him, it is enough to make him consider himself as the intended victim; he is from that moment effectually *struck*, and if he is not possessed of great fortitude, so as to be able to repel the thought and divert his mind from it, or to persuade himself that it is nothing but the work of a disturbed imagination, he will sink under the terror thus created, and at last perish a victim, not indeed to witchcraft, but to his own credulity and folly.'

"But men of such strong minds are not often found; so deeply rooted is the belief of the Indians in those fancied supernatural powers. It is vain to endeavor to convince them by argument, that they are entirely founded in delusion and have no real existence. The attempt has been frequently made by sensible white men, but always without success."

More than a hundred and fifty years ago, while the Delawares still occupied this portion of the State, there was a Quaker named John Anderson, a traveling merchant among the Indians, known far and wide by them as "the honest Quaker trader." This man, knowing the almost unlimited confidence which the natives reposed in him, endeavored to convince them of the utter fallacy of their foolish superstition; but finding argument vain, at last requested that their most powerful sorcerers might be produced, and in presence of the tribe and chiefs and the old men, might exercise on him the most potent spells of their magic, and if they should succeed in working harm upon him, even in the slightest degree, then he would not only acknowledge their supernatural power, but would pay a goodly amount of merchandise, of such kinds as Indians most covet, in forfeit for his discomfiture. His only stipulation was that the conjurer should be unarmed, and, to guard against the possibility of poison, that he should not attempt to approach nearer than a specified distance of about twelve feet.

The first magician to whom this opportunity was offered utterly refused to injure so good a man; one whom the Indians all loved for his uprightness; No! the Great Spirit forbid that he should turn the terrible glance of the evil eye on the *honest Quaker*! This most considerate course was greeted with the warmest admiration and applause by the assembled Delawares, and caused them to regard the conjurer with more reverence than ever.

But another was found who was less conscientious, and who boasted that neither the distance of twelve feet, nor yet, of twelve miles, could in the least interfere with the certain effect of his deadly spells.

So honest John Anderson brought out the enticing goods which were to forfeit, and then stood firm and serene before the fearful man who claimed such wonderful powers. He was dressed and tricked out in a manner most infernal; covered from head to toe with a bear skin, black as jet, and closed together just as it grew upon the animal. In addition to this were a pair of satanic horns upon the head, all

intended to strike the victim dumb by its terrible appearance. But it had no such effect on the Quaker. The spectators had implored him to desist from his fool-hardiness, as they thought it to be, and when he persisted, they looked upon him with profoundest pity, and some covered their eyes with their blankets to shut out the fearful sight, for they loved this man of integrity with a surpassing affection, and they would not that he should incur a fate so dreadful. It is barely possible that at this time, with all this commiseration, there may have floated through the red man's mind some consolatory visions of the delights of an Indian administration upon the personal effects of the upright Quaker, who so persistently courted his own doom, but, however that may have been, John Anderson boldly faced the diabolical antics and gesticulations of the horned wizard, and never blenched through an interminable half-hour of wool-picking and contortions; at the end of which the red trickster suddenly ceased his incantations, announcing that the pale face was impervious to them on account of having been accustomed to living on salted provisions, the salt having a repellent effect on that invisible substance which was always so fatal in its effects when directed against Indians.

But though the chiefs and sachems and warriors saw with their own eyes the discomfiture of their sorcerer, and the triumph of the good Quaker—congratulating him on his miraculous escape, and gazing pensively upon the bright-colored merchandise as it now disappeared from their sight and was returned to the packages; yet their superstitious belief in the power of the conjurer had not diminished one iota.

Even in the administration of medicines to the sick, we are told by an old Moravian chronicler that these preparations were "mixed with superstitious practices, calculated to guard against the powers of witchcraft, in which, unfortunately, they have a strong belief. Indeed, they are too apt to attribute the most natural deaths to the arts and incantations of sorcerers, and their medicine is, in most cases as much directed against those as against the disease itself. . . . There is a superstitious notion, in which all their physicians participate, which is that when an emetic is to be administered, the water in which the potion is mixed must be drawn up a stream, and if for a cathartic, downward. This is, at least, innocent, and not more whimsical perhaps, nor more calculated to excite a smile than some theories of grave learned men in civilized countries."

At the time when the Mengwe and the Lenape first became known to the white men, they respectively held towards each other the posi-

tions of conqueror and vassal. The attitude of the Iroquois, however, was not wholly that of tyrants over the Delawares, for they mingled, to some extent, the character of protectors with that of masters. It has been said of them that "The humiliation of tributary nations was to them (the Iroquois) tempered with a paternal regard for their interests in all negotiations with the whites, and care was taken that no trespass should be committed on their rights, and that they should be justly dealt with," which, being interpreted, seems to mean that the Mengwe would, so far as lay in their power, see to it that none others than themselves should be permitted to despoil the Lenape. They expected from them an annual tribute, an acknowledgement of their state of vassalage, and, on this condition they were permitted to occupy their former hunting grounds.

Bands of the Five Nations, however, were interspersed among the Delawares and Shawnees and established their villages there; probably more as a sort of police, and for the purpose of keeping a watchful eye on them, than for any other purpose.

The Shawnees were a people which had been expelled from the far southwest by stronger tribes, and a portion of them, traveling eastward as far as the country adjoining the Delawares, had been permitted to erect their lodges there, but were, like the Lenape, held in a state of subjection by the Iroquois.

The feelings with which the Delawares regarded their conquerors were those of inextinguishable hatred, held in abeyance by fear, and they also pretended to a feeling of superiority, on account of their more ancient lineage, and their farther advance from original barbarism, which latter claim was, perhaps, well founded. They also alleged that the "Mingoes" were addicted to cannibalism, in eating their prisoners; but for this charge there does not appear to have been the slightest shadow of foundation.

On the part of the Iroquois, the feeling towards their vassals was one of haughty superiority. There is no recorded instance where unmeasured insult and stinging contempt, were more wantonly and publicly heaped on a cowed and humiliated people, than on the occasion of a treaty held in Philadelphia, in 1742, where Connossatego, an old Iroquois chief, having been requested by the Governor to attend (really for the purpose of forcing the Delawares to yield up the rich lands of the Minisink), arose in council, where whites and Delawares and Iroquois were convened, and in the name of all the deputies of his

confederacy, said to the Governor, that the Delawares had been an unruly people, and were altogether in the wrong, and that they should be removed from their lands; and then, turning most superciliously towards the abashed Delawares he said: "You deserve to be taken by the hair of your heads, and shaken till you recover your senses and become sober. We have seen a deed, signed by nine of your chiefs over fifty years ago, for this very land. But how came you to take it upon yourselves to sell lands at all? We conquered you, we made women of you. You know you are women, and can no more sell lands than women. Nor is it fit that you should have power to sell lands, since you abuse it. You have had clothes, meat, and drink, by the goods paid you for it, and now you want it again, like children as you are. What makes you sell lands in the dark? Did we ever receive any part, even to the value of a pipe-shank, from you for it? This is acting in the dark, very different from the conduct which our Six Nations observe in the sale of land. But we find you are none of our blood; you act a dishonest part in this, as in other matters. Your ears are ever open to slanderous reports about your brethren. For all these reasons we *charge you to remove instantly! We don't give you liberty to think about it. You are women!* Take the advice of a wise man and *remove instantly!* You may return to the other side of the river where you came from, but we do not know whether, considering how you have demeaned yourselves, you will be permitted to live there, or whether you have not already swallowed that land down your throats, as well as the land on this side. You may go either to Wyoming or Shamokin, and then we shall have you under our eye, and can see how you behave. *Don't deliberate, but go, and take this belt of wampum.*"

He then forbade them ever again to interfere in any matters between white man and Indian, or ever, under any pretext, to pretend to sell lands, and, as they (the Iroquois), he said, had some business of importance to transact with the Englishmen, he commanded them to immediately leave the council, like women and children as they were.

We do not find that in the then middle colonies, the Five Nations had ventured so far in their hostile conduct towards the Delawares as they had done to the Mohicans, though the alliance between the Dutch and Five Nations, and afterwards between the English and the latter, was much against both, and, indeed, more against the Delawares than the Mohicans. Yet by turning to treaties and councils held with these nations, between the years 1740 and 1760, we find much insolent language which the Iroquois were, we will say, permitted, but which the people concerned say were "bid or hired to make, against

the Delawares, for the purpose of stopping their mouths, preventing them from stating their complaints and grievances, and asking redress from the colonial government."

The result of such language as that which was made use of to the Delawares, by the Six Nations, in 1742, and at other times afterwards, might easily have been foretold. For although now these defenseless people had to submit to such gross insults, instead of seeing their grievances redressed, yet they were not ignorant of the manner in which they might one day take revenge. The door to the



Hewn Log House, Built in 1790, Franklin

French, who were enemies to the English, being open to them always, they had but to go "on one side" (as they expressed themselves) to be out of the way of the Iroquois, and they could obtain from the possessors of Canada and Louisiana, all that they wanted, firearms, hatchets, scalping knives, ammunition, etc.

They did so and removed to the Ohio country, whither they were followed by others, from time to time, and by the time the French War broke out they were in perfect readiness, and, joining the enemies of Great Britain, they murdered great numbers of the defenseless inhabitants of Pennsylvania, laid the whole frontier waste, and spread terror and misery far and wide, by the outrages they committed.

Upon the occasion above mentioned—the Indian treaty at Philadelphia, in 1742—when the Iroquois chief, Connossatego, commanded the Delawares instantly to leave the council house, where their presence would no longer be tolerated, the outraged and insulted red men were completely crestfallen and crushed, but they had no choice except to obey. They at once left the presence of the Iroquois, returned to their homes on the beautiful Lenape Whittuck—now their homes no longer—and prepared to bid them adieu forever.

We may imagine the agony of hatred, more bitter than gall, and yet wholly impotent, with which they thought of the haughty tyranny of the Iroquois, and the cupidity and double dealing of the white man, as they took up their sad march towards the land of their banishment, in the valley of the Susquehanna. Those lands were already occupied by the Shawnees, but they, also being under tribute to the Mengwe, dared not protest against the new occupancy, so they moved along and made room for the Delawares, some of whom pitched their lodges at Wyoming, while some passed on to the West Branch, and others even crossed the Alleghenies. A most melancholy removal for an ancient people who regarded themselves as the very essence of Indian aristocracy.

But the day of humiliation came to the Iroquois, too, at last, for the palefaces became tired of their presence, totally destroyed their power, and drove them from the "long council-house" of their fathers, by the rapid and decisive campaign of General Sullivan in 1779. Their prostration was complete, and the Delawares were avenged. Both Mengwe and Lenape looked longingly back toward their old homes, and they humbly asked, and procured from the whites a stipulation that the burial places of their fathers should remain undisturbed. And for many years afterwards they came annually; sometimes in small parties, and sometimes singly, dejected pilgrims to those sacred shrines. How agonizing must have been the feelings of the proud and sensitive wanderers. Well might their stern impassiveness give way, and their tears flow without shame, as they bowed heads above the graves of their fathers, and in utter despair and heart-sickness remembered that they were now but exiles and strangers; that a domineering and hostile race had become masters of those ancient hunting grounds from which the original people had faded and vanished forever. To quote the words of the poet: "They died not by hunger, or lingering decay—'Twas the steel of the white man that swept them away."

In his very valuable contribution to Pennsylvania history, "The Indian Wars of Pennsylvania," the author, C. Hale Sipe says the

following: "Go where we may, in Pennsylvania, we are put in remembrance of the American Indian by the beautiful names he gave to the valleys, streams and mountains where he roamed for untold generations, never dreaming that from afar would come a stronger race which would plant amid the wilderness the hamlet and the town and cause cities to rise where the forest waved over the home of his heart. The Wyoming Valley; the Tuscarora Valley; the winding Susquehanna; the blue Juniata; the broad Ohio; the Kittatinny Mountain; the Allegheny Mountains—these are but a few of the everlasting reminders of the Pennsylvania Indians. Until the new heavens arch themselves and until the new earth comes, our Pennsylvania valleys will lie smiling in the sunlight, our Pennsylvania streams will go singing to the sea, and our Pennsylvania mountains will lift their summits to the sky; and throughout the ages may succeeding generations of Pennsylvanians realize that the Indian loved these valleys, these streams, these mountains, with a love as strong as that hallowing passion which touched the Grecian mountain-pass of Thermopylae more than twenty-four hundred years ago, and has caused it to glow with never-dying lustre through the long night of centuries. It was love for the land of his fathers that caused the Indian to fight to the death for his home and hunting grounds."

Another author, more than sixty years ago, said: "If the Indian should be entirely banished from our borders, the memory of him cannot die, for—

'Their names are on our waters,
We cannot wash them out.' "

The dialects of the Six Nations bore a strong resemblance to each other, though there were still differences which marked them as distinct. Those who understood one were able to converse in each of the others, and in council the representatives of each nation had no difficulty in interpreting what was said by all. The Mohawk and Oneida strongly resembled each other, and the Seneca and Cayuga were the same. The Onondaga "was considered by the Iroquois as the most finished and majestic," while to our ears it is the most harsh, and the Oneida the most musical.

They use nineteen letters, having no labials or liquids, except occasionally is heard among the Mohawks the sound of L and among the Tuscaroras the sound of F. The Senecas and Cayugas talk all day without shutting their lips, and there are no oaths in their language. Before an Indian can be profane he must learn French or English, and

his language is so constructed, too, that evasion is almost impossible. Metaphors are in constant requisition in Indian speeches and conversation. If one comes in when the weather is very cold, he says, "It is a nose cutting morning." If he wishes to reflect upon a proposition before deciding, he says, "I will put the matter under my pillow, and let you know." He says of an emaciated person, "He has dry bones." A steamboat is called "The ship impelled by fire." A horse is a "log carrier"; a cow, a "cud chewer," and a goat, a "scented animal."

In ancient times, when the hunters encamped in the woods, they kept warm by covering themselves with the boughs of hemlock, and in later days, if an Indian were about to repair his cabin, he would say, "I will surround it with hemlock boughs," meaning I will make it warm and comfortable. When a chief had made a speech at the opening of a council, he finished by saying, "the doors are now open, you can proceed." The messenger of the Six Nations to the Senecas was called "the man who carries the fire and smoke," meaning that he had charge of the council-fire and kept it bright.

The Iroquois called themselves the real people; and in speeches or conversation, if allusion was made to white people, they said "our younger brethren." The President of the United States was called "The City Eater," or "The Town Destroyer," on account of the destruction Washington's armies caused wherever they went. They afterwards called him "Father of the Thirteen Fires."

The Iroquois had the masculine, feminine, and neuter genders. The masculine and feminine were denoted sometimes by giving the same animal different names, and by prefixes. All inanimate objects were placed in the neuter gender.

CORNPLANTER, THE GREAT SENECA CHIEF

Cornplanter, whose Indian name was Garganwahgah, or Gyantwachias, meaning "The Planter," was a noted chief of the Senecas, also known as John O'Bail, supposed to have been born at Ganawagus on the Genesee River, in New York, some time between 1732 and 1740. His father was a white trader named John O'Bail, or O'Beel, said by some historians to have been an Englishman, while others say that he was a Dutchman. Cornplanter's mother was a full-blooded Seneca.

In a letter written by Cornplanter to the Governor of Pennsylvania, he gives the following facts of his early youth: "When I was a child, I played with the butterfly, the grasshopper, and the frogs; and

as I grew up, I began to pay some attention and play with the Indian boys in the neighborhood, and they took notice of my skin being of a different color from theirs, and spoke about it. I inquired from my mother the cause, and she told me my father was a resident of Albany. I still ate my victuals out of a bark dish. I grew up to be a young man and married a wife, and I had no kettle or gun. I then knew where my father lived, and went to see him, and found he was a white man and spoke the English language. He gave me victuals while I was at his house, but when I started to return home, he gave me no provisions to eat on the way. He gave me neither kettle or gun."

By some authorities he is said to have been among the Indians at Braddock's defeat, but this statement has been doubted. During the Revolutionary War, he went over with his tribe to the English side. Being a chief of high rank and in the full vigor of manhood, he no doubt participated in the principal engagements of the Senecas against the United States in that conflict. Some authorities have said that he was present at the massacres at Cherry Valley and Wyoming, in which the Seneca tribe took a prominent part. It is believed that he was probably with Bald Eagle, a chief of the Wolf Clan of Delawares, when young James Brady was killed, in August, 1778. It was this incident and the later killing of Captain John Brady, father of James, by three Iroquois Indians that led the noted scout, Captain Samuel Brady to make a solemn vow to avenge the deaths of his brother, James, and his father and whose accomplishment of his purpose has been related in a previous chapter. And one of Brady's victims was Bald Eagle, who had killed his brother. Some authorities have said, too, that he was with Guyasuta when Colonel Broadhead defeated the forces of the latter at the mouth of the Broken Straw, in the summer of 1779. This can very well be doubted, inasmuch as it is clear that, at this time, Cornplanter was actively engaged in the Genesee country in New York in opposing the campaign of General Sullivan.

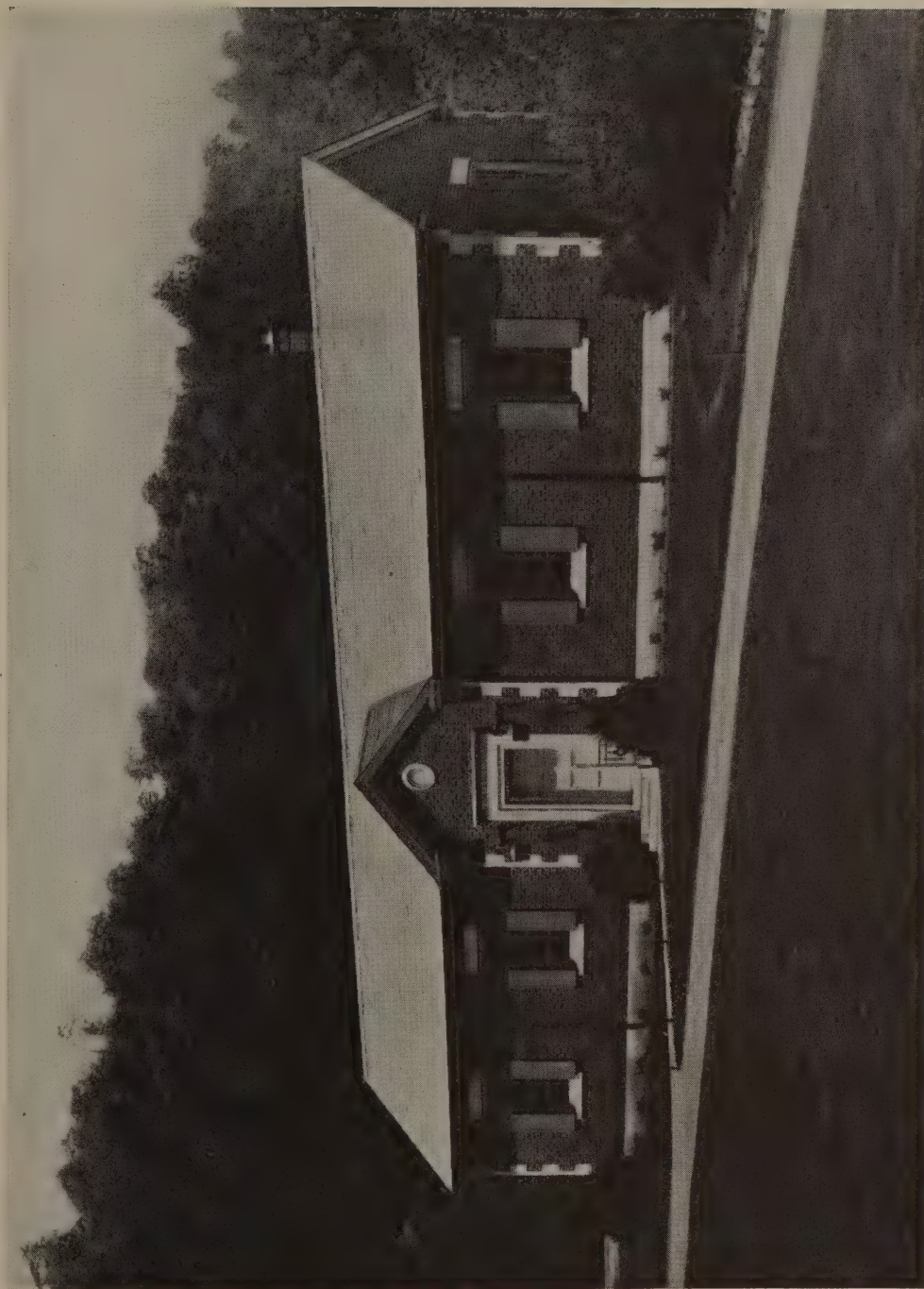
In 1780, under Brant and Johnson, Cornplanter led the Senecas in their raids against the settlers in the valleys of the Schoharie and Mohawk. On one of these raids, his father fell into his hands as a prisoner. The father did not recognize the son, and after marching for some miles, Cornplanter stepped before him and addressed him as follows:

"My name is John O'Bail, commonly called Cornplanter. I am your son. You are my father. You are now my prisoner, and subject to the customs of Indian warfare; but you shall not be harmed. You

need not fear. I am a warrior. Many are the scalps which I have taken. Many prisoners have I tortured to death. I am your son. I was anxious to see you and greet you in friendship. I went to your cabin and took you by force; but your life shall be spared. Indians love their friends and their kindred, and treat them with kindness. If you now choose to follow the fortunes of your yellow son and to live with our people, I will cherish your old age with plenty of venison, and you shall live easy. But if it is your choice to return to your fields and live with your white children, I will send a party of trusty young men to conduct you back in safety. I respect you, my father. You have been friendly to Indians, and they are your friends." The father preferred his white children, and chose to return to them.

Notwithstanding the fact that Cornplanter was a bitter enemy of the United States during the Revolutionary War, he became a firm friend of the young Republic upon the conclusion of peace. He comprehended the growing power of America, and was incensed with the ingratitude which Great Britain showed to the Senecas for their fidelity during the American Revolution. He attended the treaty at Fort Stanwix (Rome, New York), in October, 1784, between the Six Nations and the "Thirteen Fires," as the Indians called the United States, where he used all the energies of his brilliant intellect in favor of peace. At this treaty the Six Nations, on October twenty-third, ceded to Pennsylvania that part of the state northwest of the boundary of the purchase of 1768, the description in the deed being set forth as follows:

"Beginning on the south side of the river Ohio, where the western boundary of the State of Pennsylvania crosses the said river, near Shingo's old town, at the mouth of Beaver Creek, and thence by a due north line to the end of the forty-second and the beginning of the forty-third degrees of north latitude; thence by a due east line separating the forty-second and the forty-third degree of north latitude, to the east side of the east branch of the Susquehanna River; thence by the bounds of the late purchase made at Fort Stanwix, the fifth day of November, Anno Domini one thousand seven hundred and sixty-eight, as follows: Down the said east branch of Susquehanna, on the east side thereof, till it comes opposite to the mouth of a creek called by the Indians Awandac, and across the river, and up the said creek on the south side thereof, all along the range of hills called Burnet's Hills by the English, and by the Indians.



Drake Museum, Drake Park

. . . . on the north side of them, to the head of a creek which runs into the west branch of Susquehanna, which creek is by the Indians called Tyadaghton, but by the Pennsylvanians Pine Creek, and down the said creek on the south side thereof to the said west branch of Susquehanna; thence crossing the said river, and running up the south side thereof, the several courses thereof to the forks of the same river, which lies nearest to a place on the river Ohio called Kittanning, and from the fork by a straight line to Kittanning aforesaid; and thence down the said river Ohio by the several courses thereof to where said State of Pennsylvania crosses the same river, at the place of beginning."

It will be noticed in the above deed of the Purchase of 1784, that the line was to run along the south bank of the west branch of the Susquehanna; thence "crossing the said river, and running up the south side thereof, the several courses and distances thereof to the forks of the same river, which lies nearest to a place on the river Ohio called Kittanning, and from the fork by a straight line to Kittanning aforesaid." The name "Canoe Place" is given in the old maps of the State to designate the point on the west branch of the Susquehanna from which the purchase line ran to Kittanning. The point also designated the head of navigation on the west branch. A survey of that line was made by Robert Galbraith, in 1786, and a cherry tree, standing on the west branch of the river was marked by him as the beginning of his survey. The same cherry tree was also marked by William P. Brady as the southeast corner of a tract surveyed by him at "Canoe Place," in 1794, on a grant in the name of John Nicholson, Esq. The town of Cherry Tree, Indiana County, now covers a part of this ground. The historic cherry tree disappeared many years ago. The Legislature of Pennsylvania, in 1893, granted an appropriation of fifteen hundred dollars for marking the historic site, and a substantial granite monument now stands where the tree stood.

The deed given at Fort Stanwix extinguished the Iroquois title to this region, but it became necessary to appease the Wyandots, Delawares and other western tribes, who likewise claimed title to the same lands. Therefore, the same commissioners who were at the treaty at Fort Stanwix, were sent to Fort McIntosh, the site of the present town of Beaver, Beaver County, where, on January 21, 1785, Pennsylvania received a deed from these Indians for the same land. The Fort Stanwix deed and the Fort McIntosh deed are identical as to

boundaries, but the consideration in the former was five thousand dollars, and in the latter two thousand dollars. "Thus," says Meginess, "in a period of about one hundred and two years was the whole right of the Indians to the soil of Pennsylvania extinguished."

These deeds included all of the counties of Lawrence, Mercer, Crawford, Butler, Venango, Forest, Warren, Clarion, Jefferson, Elk, McKean, Cameron, Potter and a part of Beaver, Allegheny, Armstrong, Erie, Indiana, Clearfield, Clinton, Tioga and Bradford.

The deed herein described, executed at the treaty at Fort Stanwix, October 23, 1784, declared to have been the boundary designated by the Indians, has been commonly called the "Last Purchase." On November 5, 1768, at the Great Congress with the Indians at Fort Stanwix, the Six Nations had conveyed to the Proprietaries of Pennsylvania all the land, within the boundaries of the province, extending from the New York line on the Susquehanna River, past Towanda and Tyadahgon creeks, up the west branch of the Susquehanna, over to Kittanning, and thence down the south side of the Allegheny and the Ohio to the mouth of the Tennessee River. By this purchase, for a consideration of ten thousand pounds, the proprietaries acquired the present counties of Green, Washington, Fayette, Somerset, Westmoreland, Cambria, Sullivan, Susquehanna and Wyoming, and parts of Beaver, Allegheny, Armstrong, Indiana, Clearfield, Center, Clinton, Lycoming, Bradford, Lackawanna, Wayne, Luzerne, Columbia, Montour, Union, Pike and Snyder, extending from the northeast to the southwest corner of the Commonwealth. This, the last purchase made by the Penns, has been commonly called the "New Purchase."

At the treaty of Fort Harmar, January 9, 1789, Cornplanter and other chiefs of the Six Nations signed a deed, in consideration of twelve hundred pounds, ceding the Presque Isle lands (the Erie Triangle) to the United States to be vested in Pennsylvania. On March 3, 1792, Pennsylvania, in consideration of \$151,640.25, paid in Continental Certificates, secured title to these lands, 202,187 acres. On October 3, 1788, an act had been passed authorizing the Supreme Executive Council to draw on the State Treasurer for a sum of money for defraying the expense of purchasing from the Indians lands on Lake Erie. It is usually called the "Purchase of the Triangle."

The cession of the Presque Isle lands offended many chiefs of the Six Nations, especially Joseph Brant, or Thayendangea, of the Mohawks, notwithstanding the treaties of Fort Stanwix and Fort Harmar. It was Brant's design to restrict the Americans to the region east of the Allegheny and Ohio. With this in mind, he sent

word to Cornplanter that the latter should hold himself in readiness to march against the settlers at Presque Isle. British agents, who covertly fostered the war carried on by the northwestern tribes, sympathized with Brant's design. Cornplanter became very unpopular with his own people, the Senecas, on account of his having signed the deed at Fort Harmar, and it was charged against him, at a council held at Canandaigua, New York, in October, 1794, that he and the Seneca chief, Little Billy, had received at Fort Harmar, \$2,000, and, at Philadelphia, \$2,000 more as the price of the Presque Isle lands. The Seneca chief, Red Jacket, presented these charges at the council. However, we find Cornplanter protesting to the United States, at Buffalo Creek, New York, in June, 1794, against the contemplated military occupation of Presque Isle.

In the meantime, on February 25, 1794, the Pennsylvania Legislature passed an act authorizing the Governor to detach troops for the protection of the settlers at Presque Isle and other places in northwestern Pennsylvania. These troops were placed under the command of Captain Ebenezer Denny, of Allegheny County. Leaving Pittsburgh on April 16, 1794, Captain Denny, with three officers and seventy-seven men, arrived at Franklin on April 25, intending to proceed directly to Le Boeuf and Presque Isle. Here he learned of the opposition of the Senecas to the plan of occupying either Le Boeuf or Presque Isle, and wrote the Governor that "a council holding at the mouth of Buffalo Creek between the chiefs of the Six Nations and the British may terminate unfavorably to our establishment." The unfriendly feelings of the Indians were increased by the murder, at Franklin, of a Munsee Delaware by a certain Mr. Robertson, in a drunken *mêlée*, General John Wilkins accompanied Captain Denny's expedition, and, notwithstanding the opposition of the Senecas, succeeded, about May 11, 1794, in reaching "the forks of French Creek, about two miles below the old post of Le Boeuf." Here a temporary post was erected, and General Wilkins wrote of the increased determination of the Senecas and British agents to interfere with the progress of the troops towards Presque Isle. Here, also, Captain Denny arrived with the rest of the troops on June 24. Soon the site of old Fort Le Boeuf (Waterford) was occupied, and four block-houses were erected there. Captain Denny was then instructed to remain at Le Boeuf for the present, a note from the Secretary of War saying, "On mature reflection, it is advisable to suspend for the present the establishment of Presque Isle." On August 10, 1794, a man named Dickson was fired upon and wounded twice by Indians, in the

Cussewago settlement, just below Le Boeuf, an act which intensified the unfriendly feelings towards the Indians.

After Wayne defeated the western tribes at Fallen Timbers on August 20, 1794, the most awesome reports spread among the Senecas of Mad Anthony's ability and bravery, thus opening the door towards final peace with this tribe. Then Timothy Pickering, on behalf of the United States negotiated a treaty with the Senecas and other members of the Six Nations, at Canandaigua, New York, on November 11, 1794, by the terms of which these Indians acknowledged the right and title of Pennsylvania to the Presque Isle lands. Early in the spring of 1795 a detachment of troops from Wayne's army, under command of Captain Russell Bissell, came to Presque Isle, occupied the place and erected a stockaded fort.

It was largely due to the influence of Cornplanter that the Senecas did not join the Miamis and other western Indians as Wayne's army marched against them. In fact, the Senecas flanked Wayne's advance. Had they thrown their great weight against Wayne, it is very doubtful whether he could have succeeded when he did. The writers of that day say that Cornplanter's success in keeping the Senecas from joining the western tribes, is the greatest service he ever rendered the Americans. Had Wayne's army met the fate of its predecessors in that great Indian uprising, it is doubtful whether the Jay Treaty with England would have been made, and that the British would have evacuated the western posts held by them.

On June 26, 1794, a council was held at Le Boeuf (Waterford, Pennsylvania), by Captain Ebenezer Denny and Andrew Ellicott with representatives of the Six Nations, among whom was Cornplanter. The Six Nations demanded that settlers be removed from the Lake region and objected to the settlement of Presque Isle, claiming that the sale of these lands at the treaty of Fort Harmar, in January, 1789, was not valid. It was feared by many at the time that Cornplanter would turn against the United States. However, the noted chieftain preferred to adjust the differences between his tribe and the Americans without resort to bloodshed. During the council, Cornplanter and his associate chiefs were fed and supported by the authorities of Pennsylvania and the United States Government.

Cornplanter also attended the treaty at Fort Harmar in 1789, in which extensive territory was conveyed to the United States in the present State of Ohio. However, his name does not appear among the signers of the treaty. He also attended the treaties of September 15, 1797, and of July 30, 1802. These acts rendered him unpopular

with the Senecas, and for a time his life was in danger. The chief, Red Jacket, seized upon these matters as a means of promoting his own popularity at the expense of Cornplanter.

In 1790 Cornplanter, accompanied by his half-brother, the Seneca chief, Half-town, visited Philadelphia to lay before President Washington certain complaints of the Senecas against Colonel John Gibson. In a speech to Cornplanter on this occasion, Washington said:

"When you return to your country, tell your people that it is my desire to promote their prosperity by teaching them the use of domestic animals, and the manner in which the white people plow and raise so much corn; and, if upon consideration, it would be agreeable to the nation at large to learn those arts, I will find some means of teaching them at such places within their country as shall be agreed upon."

The following facts concerning this noted chieftain are quoted from Day's "Historical Collections":

"Having buried the hatchet, Cornplanter sought to make his talents useful to his people by conciliating the good-will of the whites, and securing from further encroachment the little remnant of his national domain. On more than one occasion, when some reckless and blood-thirsty whites on the frontier had massacred unoffending Indians in cold blood, did Cornplanter interfere to restrain the vengeance of his people. During all the Indian wars from 1791 to 1794, which terminated with Wayne's treaty, Cornplanter pledged himself that the Senecas should remain friendly to the United States. He often gave notice to the garrison at Fort Franklin of intended attacks from hostile parties, and even hazarded his life on a mediatorial mission to the western tribes. He ever entertained a high respect and personal friendship for General Washington, 'the great councillor of the Thirteen Fires,' and often visited him, during his presidency, on the business of his tribe. His speeches on these occasions exhibit both his talent in composition and his adroitness in diplomacy. Washington fully reciprocated his respect and friendship. . . . When Washington was about retiring from the presidency, Cornplanter made a special visit to Philadelphia to take an affectionate leave of the great benefactor of the white man and the red.

"After peace was permanently established between the Indians and the United States, Cornplanter retired from

public life, and devoted his labors to his own people. He deplored the evils of intemperance, and exerted himself to suppress it. The benevolent efforts of missionaries among his tribe always received his encouragement, and at one time, his own heart seemed to be softened by the words of truth; yet he preserved, in his later years, many of the peculiar notions of the Indian faith."

In the spring of 1791, Colonel Thomas Proctor was sent on a mission to the Indians of the northwest. During his journey, when he had reached the "Great Bend" on the upper Allegheny on April sixth, he met four Indian runners going with belts from Cornplanter to the Indians at the headwaters of the Allegheny, to inform them that several Delawares had recently been killed near Fort Pitt by some white people, said to be a party of Virginians. The Indians who had escaped being killed turned against the whites and killed and scalped seventeen of them some miles above Pittsburgh. The Indians who thus fell upon the settlers were pursued by a band of militia which overtook them, and compelled the Seneca chief, Newarle, to accompany them to Fort Pitt. Newarle and the commander at Fort Venango (Franklin) were taking a boatload of supplies for Cornplanter's Indians at the time when he was overtaken by the militia, and these supplies were likewise taken by the militia to Fort Pitt, although they had been purchased by Cornplanter. Colonel Proctor, after holding a conference with the four Indian runners, descended the Allegheny to Fort Venango, where he met Cornplanter and accompanied him up the Allegheny to his town in Warren County. Here Proctor was entertained by the great Seneca, with a feast in true Indian hospitality.

Cornplanter entertained a high regard for General William Irvine who, for several years subsequent to 1792, was engaged in superintending the surveys of land northwest of the Allegheny. Indeed, an affectionate intimacy subsisted between the two, and reciprocal visits were often made by them. Cornplanter said that General Irvine was one of the few white men who spoke the truth. On one occasion, when some Delawares of the Wolf Clan had threatened the life of the general, Cornplanter sent some of his own Indians to watch their movements. General Irvine at this time took up large tracts of land on Brokenstraw Creek in Warren County, some miles below Cornplanter's Reservation.

When General Anthony Wayne was drilling the Legion of the United States at that place, since known as Legionville, on the north



The "Wolverine," Formerly the "Michigan," Mother of the American Navy. The Ship is
Tied Up in Misery Bay, Peninsula Park, Erie, Pending Rehabilitation

bank of the Ohio, about twenty miles below Pittsburgh, preparatory to leading it against the western Indians, in 1794, he was visited by both Cornplanter and Goyasuta. Afterwards Cornplanter went on a peace mission among the hostile western tribes, but in vain. He found them too much elated by the overwhelming and inglorious defeats which they had administered to the armies of Generals Harmar and St. Clair, and too much under the influence of British traders. While Cornplanter was on his peace mission, three of his people were basely attacked near the Genesee by some whites, who killed one and severely wounded another. On hearing this news Cornplanter said: "It is hard when I and my people are trying to make peace with the whites that we should receive such a reward."

In the early winter of 1795 Major Thomas Butler, then in command at Fort Franklin, informed Major Isaac Craig of Pittsburgh that Cornplanter had at his sawmill a large quantity of boards. Craig immediately dispatched Marcus Hulings, an experienced waterman, with three bags of money and some other articles up the Allegheny to Cornplanter's town to purchase this lumber. Hearing the next day that some private persons had gone on the same errand, Major Craig dispatched James Beard on horseback with a letter, informing the great chief of Hulings' object. Mr. Beard arrived in time and secured the lumber. The following is the letter of Cornplanter to Major Craig in reply to the latter's letter:

"Genesadego, 3d December, 1795.

"I thank the States for making me such kind offers. We have made peace with the United States as long as water runs, which was the reason that I built a mill in order to support my family by it. More so, because I am getting old and not able to hunt. I also thank the States for the pleasure I now feel in meeting them again in friendship, you have sent a man to make a bargain with me for a certain time which I do not like to do. But as long as my mill makes boards, the United States shall always have them in preference to any other, at the market price, and when you want no more boards, I can't make blankets of them. As for the money you have sent, if I have not boards to the amount, leave it and I will pay it in boards in the Spring.

"I thank you kindly for the things you have sent me. I would thank Major Craig or Col. Butler to let Col. Pickering

and Gen. Washington know that there is a grate deal of damage done in this country by Liquor; Capt. Brant has kiled his son and other chiefs has done the same, and when the drink was gone and they began to think of the horid crime they had comited, they resigned their command in the Nation; two Chiefs has been kiled, the one at Fort Franklin the other at Genesee. I have sent a speech to the States conserning the Chief killed at Franklin, and has been waiting all summer to receive pay for him, but can see no sign of its coming. I am by myself to bear all the burden of the people. Now father take pittty on me and send me 40 dollars worth of black Wampum and 10 of white; and I expect to see it in two months and an half, as I must make new Chiefs with it again that time, to help me. I wish to hear from my son and what progress he is making in his learning, and as soon as he is learned enough I want him at home to manage my business for me. I will leave it all to my father, Gen. Washington, to judge when he is learned enough. My compliments to my father and the United States, and I wish it was possible for me to live forever in the United States.

his
CAPT. X. O. BEAL.
mark''

It will be noted that, in the above letter, Cornplanter asks what progress his son "is making in his learning." This was his favorite son, Henry O'Bail, who was carefully educated, but later became a drunkard and caused much sorrow to his aged father.

Reference has been made to the fact that Cornplanter was a firm friend of the United States. He gave additional proof of this friendship when, in 1812, he came from the retirement of his sylvan retreat on the banks of the Allegheny, and offered himself and two hundred warriors to Colonel Dale, at Franklin, for a regiment which the colonel was forming in Crawford and Venango counties to go to the defense of Erie. He was much disappointed when he learned that his services could not be accepted. However, a number of the Senecas did take an active part in the War of 1812. Among them were Cornplanter's son, Major Henry O'Bail, and his half-brother, Half-town. Both of these were conspicuous in several engagements on the Niagara frontier.

Rev. Timothy Alden, then president of Allegheny College, visited Cornplanter at his village on the Allegheny, in Warren County, in 1816, and thus describes the chief and his village:

"Jennesadaga, Cornplanter's village, is on a handsome piece of bottom land, and comprises about a dozen buildings. It was grateful to notice the agricultural habits of the place, and the numerous enclosures of buckwheat, corn, and oats. We also saw a number of oxen, cows, and horses, and many logs designed for the sawmill and the Pittsburgh market. Last year, 1815, the Western Missionary Society established a school in the village, under Mr. Samuel Oldham. Cornplanter, as soon as apprised of our arrival, came over to see us, and took charge of our horses. Though having many around to obey his commands, yet, in the ancient patriarchal style, he chose to serve us himself, and actually went into the fields, cut the oats, and fed our beasts. He appears to be about 68 years of age, and 5 feet 10 inches in height. His countenance is strongly marked with intelligence and reflection. Contrary to the aboriginal custom, his chin is covered with a beard three or four inches in length. His house is of princely dimensions compared with most Indian huts, and has a piazza in front. He is owner of 1,300 acres of excellent land, 600 of which encircle the groundplot of his little town. He receives an annual stipend from the United States of \$250.00. Cornplanter's brother, lately deceased, called the prophet, was known by the high-sounding name Guskukewanna Konnediu, or Large Beautiful Lake. Kinjuquade, the name of another chief, signified the place of many fishes;—hence probably the name Kinjua."

Again, quoting from Day's "Historical Collections":

"In 1821-22 the commissioners of Warren County assumed the right to tax the private property of Cornplanter, and proceeded to enforce its collection. The old chief resisted it, conceiving it not only unlawful, but a personal indignity. The sheriff again appeared with a small posse of armed men. Cornplanter took the deputation to a room around which were ranged about a hundred rifles, and with the sententious brevity of an Indian, intimated that for each rifle a warrior would appear at his call. The sheriff and his men speedily withdrew, determined, however, to call out the militia. Several prudent citizens, fearing a sanguinary collision, sent for the old chief in a friendly way to come to Warren and compromise the matter. He came, and after some persuasion, gave his note for the tax,

amounting to \$43.79. He addressed, however, a remonstrance to the Governor of Pennsylvania, soliciting a return of the note, and an exemption from such demands against land which the state itself had presented to him. (Cornplanter's note was never paid. The state exempted his lands from taxes.) He met them at the court house in Warren, on which occasion he delivered the following speech, eminently characteristic of himself and his race:

" 'Brothers: Yesterday was appointed for us all to meet here. The talk which the governor sent us pleased us very much. I think that the Great Spirit is very much pleased that the white people have been induced so to assist the Indians as they have done, and that He is pleased also to see the great men of this state and of the United States so friendly to us. We are much pleased with what has been done.

" 'The Great Spirit first made the world, and next the flying animals, and found all things good and prosperous. He is immortal and everlasting. After finishing the flying animals, He came down on earth and there stood. Then He made different kinds of trees, and weeds of all sorts, and people of every kind. He made the spring and other seasons, and the weather suitable for planting. These He did make. But stills to make whiskey to be given to Indians He did not make. The Great Spirit bids me tell the white people not to give Indians this kind of liquor. When the Great Spirit had made the earth and its animals, He went into the great lakes, where He breathed as easily as anywhere else, and then made all the different kinds of fish. The Great Spirit looked back on all that He had made. The different kinds He made to be separate, and not to mix with and disturb each other. But the white people have broken His command by mixing their color with the Indians. The Indians have done better by not doing so. The Great Spirit wishes that all wars and fighting should cease.

" 'He next told us that there were three things for our people to attend to. First, we ought to take care of our wives and children. Secondly, the white people ought to attend to their farms and cattle. Thirdly, the Great Spirit has given the bears and deer to the Indians. He is the cause of all things that exist, and it is very wicked to go against His will. The Great Spirit wishes me to inform the people that they should quit

drinking intoxicating drink, as being the cause of disease and death. He told us not to sell any more of our lands, for He never sold lands to any one. Some of us now keep the seventh day; but I wish to quit it, for the Great Spirit made it for others, but not for the Indians, who ought every day to attend to their business. He has ordered me to quit drinking any intoxicating drink, and not to lust after any woman but my own, and informs me that by doing so I should live the longer. He made known to me that it is very wicked to tell lies. Let no one suppose this I have said now is not true.

"I have now to thank the Governor for what he has done. I have informed him what the Great Spirit has ordered me to cease from, and I wish the Governor to inform others of what I have communicated. This is all I have at present to say."

"The old chief appears, after this, again to have fallen into seclusion, taking no part even in the politics of his people.

"Notwithstanding his profession of Christianity, Cornplanter was very superstitious. 'Not long since,' says Mr. Foote, of Chautauqua County, 'he said the Good Spirit had told him not to have any thing to do with the white people, or even to preserve any mementoes or relics that had been given to him, from time to time, by the pale-faces, whereupon, among other things, he burnt up his belt, and broke his elegant sword.'"

In the "Pittsburgh Gazette" of May 28, 1830, we read an account of a trip of the steamboat, the "Allegheny," as follows:

"She left Pittsburgh on her third trip on the 14th of May, 1830, with sixty-four passengers and twenty-five or thirty tons of freight, and arrived at Warren at nine o'clock on the 19th, —three and one-half days' running time,—and on the same evening she departed from Warren for Olean. At nine o'clock the next day she arrived opposite the Indian village of Cornplanter. Here a deputation of gentlemen waited on this ancient and well-known Seneca chief, and invited him on board this new and, to him, wonderful visitor, a steamboat. He was in all his native simplicity of dress and manner of living, lying on his couch, made of rough pine boards, and covered with deer skins and blankets. His habitation, a two-story log house, was in a state of decay, without furniture, except a few benches, and wooden bowls and spoons to eat out of. He was a smart, active man, seemingly possessed of all his strength of mind and per-

fect health. He, with his son, Charles, sixty years of age, and his son-in-law, came on board and remained until she passed six miles up, and then returned in their own canoe, after expressing great pleasure."

Concerning the last days of this great leader of the Senecas, a gentleman wrote the following in "The Democratic Arch," a newspaper published in Franklin:

"I once saw the aged and venerable chief, and had an interesting interview with him, about a year and a half before his death. I thought of many things when seated near him,



(Holmes Crosby, Architect)

Drake Memorial State Park, Titusville

beneath the wide spreading shade of an old sycamore, on the banks of the Allegheny—many things to ask him—the scenes of the Revolution, the generals that fought its battles and conquered, the Indians, his tribe, the Six Nations, and himself. He was constitutionally sedate,—was never observed to smile, much less to indulge in the 'luxury of a laugh.' When I saw him, he estimated his age to be over 100 years. I think 103 was about his reckoning of it. This would make him near 105 years old at the time of his decease. His person was much stooped and his stature was far short of what it once had been—not being over 5 feet 6 inches at the time I speak of. Mr.

John Struthers, of Ohio, told me, some years since, that he had seen him near 50 years ago, and at that period, he was about his height—*viz.*, 6 feet 1 inch. Time and hardship had made dreadful impressions upon that ancient form. The chest was sunken, and his shoulders were drawn forward, making the upper part of his body resemble a trough. His limbs had lost their size and become crooked. His feet, too (for he had taken off his moccasins), were deformed and haggard by injury. I would say the most of the fingers on one hand were useless; the sinews had been severed by a blow of the tomahawk or scalping knife. How I longed to ask him what scene of blood and strife had thus stamped the enduring evidence of its existence upon his person! But to have done so would, in all probability, have put an end to all further conversation on any subject,—the information desired would certainly not have been received,—and I had to forego my curiosity.

“He had but one eye, and even the socket of the lost organ was hid by the overhanging brow resting upon the high cheek bone. His remaining eye was one of the brightest and blackest hue. Never have I seen one, in young or old, that equalled it in brilliancy. Perhaps it had borrowed lustre from the eternal darkness that rested on its neighboring orbit. His ears had been dressed in the Indian mode; all but the outside ring had been cut away. On the one ear this ring had been torn asunder near the top, and hung down his neck like a useless rag. He had a full head of hair, white as the ‘driven snow,’ which covered a head of ample dimensions and admirable shape. His face was not swarthy; but this may be accounted for from the fact, also, that he was but half Indian.

“He told me that he had been at Franklin more than 80 years before the period of our conversation, on his passage down the Ohio and Mississippi, with the warriors of his tribe, on some expedition against the Creeks or Osages. He had long been a man of peace, and I believe his great characteristics were humanity and truth. It is said that Brant and Cornplanter were never friends after the massacre of Cherry Valley. Some have alleged, because the Wyoming massacre was perpetrated by the Senecas, that Cornplanter was there. Of the justice of this suspicion there are many reasons for doubt. It is certain that he was not the chief of the Senecas at

that time; the name of the chief in that expedition was Ge-en-quah-toh, or He-goes-in-the-smoke.

"As he stood before me—the ancient chief in ruins—how forcibly was I struck with the truth of the beautiful figure of the old aboriginal chieftain, who, in describing himself, said, he was 'like an aged hemlock, dead at the top, and whose branches alone were green.' After more than one hundred years of most varied life—of strife, of danger, of peace—he at last slumbers in deep repose, on the banks of his own beloved Allegheny."

This great leader of the Senecas died at Cornplanter Town, Warren County, on the banks of his long-loved Allegheny, on February 18, 1836—the passing of the last great Indian chief of Pennsylvania. "Whether at the time of his death he expected to go to the fair Hunting Grounds of his own people or to the Heaven of the Christian, is not known." It was his wish that his grave should remain unmarked. However, the State of Pennsylvania erected a monument at his grave, in 1866, the first monument erected by any State of the Union to an Indian chief, bearing the following inscription:

Gy-ant-wa-chia, The Cornplanter,
JOHN O'BAIL, ALIAS CORNPLANTER,
DIED

At Cornplanter Town, Feb. 18, A. D. 1836
Aged About 100 Years.

"Chief of the Seneca tribe, and a principal chief of the Six Nations from the period of the Revolutionary War to the time of his death. Distinguished for talent, courage, eloquence, sobriety, and love for tribe and race, to whose welfare he devoted his time, his energy, and his means during a long and eventful life."

Three of Cornplanter's children were present at the dedication of his monument, the last of whom died in 1874, aged about one hundred years. Other descendants still reside on the Cornplanter Reservation, in Warren County, cherishing the memory of "one of the bravest, noblest and truest specimens of the aboriginal race."

"For his many valuable services to the whites," Cornplanter received several government grants of lands. The history of these, as well as other pertinent facts, is most interestingly related in a paper

read at a meeting of the Historical Society of Western Pennsylvania on October 29, 1940, by Merle H. Deardorff, of Warren, chairman of the Cornplanter Indian Committee of the Pennsylvania Federation of Historical Societies, which we quote herewith:

"On the Upper Allegheny in Warren County, near the New York state line, there are today two state-erected monuments to Indians. One is a marble shaft set up many years ago as the state's tribute to Cornplanter, one of the greatest of his race; the other is a tract of land given to him and his heirs forever—all that is left to his people for a place they can call their own in Pennsylvania. Some forty of his descendants, all Senecas, still live there in our last remaining Indian settlement.

"Neither monument is very impressive to the casual eye. What importance the place has arises out of the reasons for its being where it is, who lived there, and what happened there. For the last fifty years of its effective life, Seneca, and hence much of Iroquois, policy in the Allegheny Valley was administered from this spot or near it; and here was born the 'new revelation,' out of national disaster, which is still the religion of a large part of the Iroquois today, wherever they are.

"Morgan's classic picture of the original League of the Iroquois as a longhouse, sheltering a happy family of five nations and organized to 'secure universal peace and welfare among men by recognition and enforcement of the forms of civil government,' may be a pathetic fallacy; but it is a picture. The Mohawk eastern door of the longhouse was on the Hudson; the western, at the Lakes. Inside the latter, near the Genesee banks, sat the Senecas, whose job it was to keep slippery the elm-bark threshold so that foes might fall down on it. In the middle, about Syracuse, the Onondagas tended the central council fire. Oneidas and Cayugas took places respectively to the east and to the west of the Onondagas.

"It need not surprise us that the federal ideal of the League was never perfectly realized in practice at any time amongst the Iroquois, any more than it has been amongst ourselves. As with our own states, these peoples were drawn together for the strength that union could give in the service of self-interest. Each of the Five Nations reserved to itself in the beginning almost complete autonomy in local affairs and

at times went its own way. The Mohawks and Oneidas were closest to the British and Dutch, and they eventually became so dependent that they were mere tools of anti-French policy. The Senecas, on the other hand, faced the rest of a hostile continent pretty much on their own and had to conduct themselves accordingly. They could not, as did the Mohawks, flee to the shelter of Mount Johnson at every forest rumor, driving Sir William to a distraction that he could not show them but that he confided to his letters.

"Even a single nation did not always act as one. When the British took over Fort Niagara in Seneca country, those living near-by could well afford to become as British as the Mohawks. But their brethren several hundred miles away down the Allegheny and on the Ohio, where the British-French conflict was still undetermined, could not be so certain as to where their interests lay. They had to guess right or perish.

"The white man came to this country wanting gold, fish, and furs. Of the first there proved to be none; of the second, a great plenty for the taking, without reference to the aborigines; but for the third commodity, French, Dutch, and English were largely dependent on the Indians in one way or another. So it is that, if one must over-simplify the really very complex story of Indian-white relations from the earliest times, it can best be resolved in terms of the fur trade.

"The French, headquartered at Quebec and Montreal, were first to realize their opportunities in the back-country, sending hucksters far north and west to collect the furs where they were, paying for them first in gauds and then—as the producers learned what was going on in the world—with the standard currency of the Indian trade: cloth, utensils, powder, guns and rum. In French hands the business was government-sponsored and controlled, and at one time or another it employed most of the modern techniques of price-fixing, subsidies, and even of "ploughing under" the surplus by burnings, under official eye, of thousands of skins in times of market-glut.

"With the Dutch and the English the pattern was different. By offering cheaper goods in greater variety they induced the Indians to come to their main posts, only latterly further west than Albany. True, many Dutch and English traders went about amongst the Indians, but they were generally a hard lot

and were regarded by the more responsible in the trade—even by the Indians themselves—as more of a liability than an asset to the business. Except as they occasionally served as spies or messengers, they seldom had official status or protection in New York. That colony's policy counted on the Indians themselves to act as middlemen; and the Iroquois lay naturally to hand and eager to serve this purpose.

"The Iroquois bestrode a country whose central position and unique system of lakes and rivers made it a natural gateway to the interior, through which went rum, powder, and strouds to the Ottawas, Miamis, and other 'far Indians' in the fur country, and by which came back the beaver and deerskins to pay for them. New York itself was poor in furs. Its crops had been reaped early. In 1671 it was remarked that scarce a single beaver remained there. Without goods of their own to exchange for what contact with the white man had made necessities for their existence, the occupants of this key position had to choose whether to move, starve, or control the trade they themselves could not originate.

"One does not have to assume that the Iroquois were naturally smarter, fiercer, or stronger than the other Indians about them to account for their rôle in the years between 1600 and 1800. Their virtues were mothered by their necessities. It seems possible, in the light of recent knowledge, that the formation of the League itself grew out of the compulsions laid upon these nations by their position. The fact that they occupied territory between the English market headquartered at Albany and the producers of raw materials determined the alliance between the British and the Iroquois which John Fiske called 'the pivotal fact' in our history. The French and the French-controlled Indians were competitors of both. Until 1763, when France finally retired from the field, the vital question for all concerned was: Shall the furs go to Albany or to Montreal?

"To control the western and southern fur trade the Iroquois had first to establish their hegemony over neighboring Indians who were as anxious to buy at wholesale as are we, and did not immediately see the advantage of doing business through a middleman. They were inclined to go around the Iroquois to deal directly with the French or with the English colonies to the south. So the Iroquois had to 'enlighten' them.

More than a hundred years of wars and shotgun alliances were necessary fully to establish Iroquoian protective custody and to extend the League's more or less real authority wherever the trade sought an outlet through the more northerly colonies.

"About the middle of 1600's it became necessary to 'enlighten' the Eries, the Andastes and other tribes living south of the Lake Erie shores and in the Allegheny Valley. The major part of the job, as usual, fell to the Senecas who were executors of Iroquois policy in these parts. At the successful conclusion of this war the Senecas let themselves in for at least three important changes. First, since the conquered were also of Iroquoian stock, the captives were easily assimilated; but in the process Seneca internal clan organization was modified. Second, large Seneca contingents moved from the old locations into western New York and the Allegheny Valley to hold the conquered in check. Third, the Senecas assumed a new responsibility. The span of the western gate widened to north and south. Their and the League's policy for the valley was 'no permanent settlements, either white or red.' Seneca outposts in charge of 'regents' or 'border barons' appeared farther and farther down the valley, where the first white traders from Pennsylvania and Virginia, such as Le Tort, Weiser, and Croghan, met them. Wandering bands of dispossessed Delawares, Shawnees, Mohicans, and others sought and got permission to settle temporarily in designated spots, but always under watchful Seneca eyes. White traders, French and English, were welcomed. Allegheny River Senecas worked on the Joncaires' Niagara portage concession, and helped French expeditions over the "hogsback" into Lake Chautauqua. When the rum or the powder got too bad, delegations of Senecas from Buckaloons (now Irvine, Warren County) went to Philadelphia to protest.

"Then in 1749 something happened that eventually transformed this relatively bloodless commercial contest into the first of all world wars. When Céleron, at the site of Warren, first openly claimed for the French King all of the Ohio and Allegheny valleys, the watchful Indians recognized the significance of what they saw. The lust for trade had turned into a lust for land, so as once and for all to master the trade. One may be sure that council fires burned long in the restless forest and that red brows knitted hard over their new problem.

Here was an open challenge to Indian policy for this valley: 'No permanent occupation.' Characteristically, the Indians waited to see what would happen. It was sixteen months after the event before a Cayuga chief finally delivered to Sir William Johnson one of Céleron's plates and so made real to him what had before been only rumor.

"In the contest that followed, the Indians' position was described by one of them as that of a 'piece of cloth between two blades of a shears.' Peter Wraxall, Johnson's secretary for Indian affairs, who ought to know, said that 'to preserve



Boulder Marking Original Drake Well, Showing Well in Right Foreground
(Erected by Canadohta Chapter, D. A. R., Titusville)

the Ballance between us & the French is great ruling Principle of the Modern Indian Politics. I believe their Affections are in our Favour, but their Fears are on the French side. . . . Thus while the Indians promise us fair & even mean it, the French overawe them from acting up to their Inclinations.'

"Successive setbacks to the British cause, such as Washington's and Braddock's defeats, caused all but the most subservient of Johnson's Mohawks to stop, look and listen. Much as they liked the English, the Iroquois did not want to bet on the wrong horse.

"With the final defeat of the French at Quebec and their retirement from the country after the peace of 1763, the Indian's 'shears' had become a single British blade aimed straight at the red man's heart. The Allegheny River Senecas under Goyasuta joined with the western Indians under Pontiac in a desperate, nearly successful, attempt to exterminate the British and the Americans. After their failure, the Senecas retired up the Allegheny, to await hopefully another contest between claimants to their lands where they might find something to their own advantage in the distress of the contestants.

"In 1775 the Allegheny Senecas were settled in 'towns' strung along the river banks for some forty-five or more miles, from the 'lower town' on the present Grant, above Warren, to Olean, New York. Here, in well-organized communities and on the flats above and below them, they raised their crops and kept their eyes on small bands of Delawares and Shawnees settled at Buckaloons, Tidioute, Hickory Town, Tionesta, and over on French Creek.

"For the most part, during the Revolution, they took direction—as did the New York Senecas—from the British commanders at Fort Niagara and their appointed representatives amongst the Indians. They were effective at Oriskany, Cherry Valley, and Wyoming, led by the Mohawk, Brant, and by their own chief warrior, Sayenqueraghta. But they had special problems of their own in another direction, involving the settlements around Fort Pitt; and they were, indeed, a sore trial to the commanders of the Western Department there. Something could be done about Delawares and Wyandots, but these canoe-loads of naked warriors, who came up from the Allegheny at night, struck and ran, were harder to handle.

"Finally, on August 11, 1779, when Sullivan was driving against the main League towns near Elmira, Colonel Brodhead left Fort Pitt with 605 soldiers and some Delawares and headed for the Seneca and Munsee towns on the Upper Allegheny. He had a brush or two with Indians on the way up, left the river at Warren, crossed the Scandia ridge, and came down on the Seneca town at the Grant. He said that for three days his troops burned the houses and destroyed the corn, as fine as any the colonel had ever seen. His report to Washington claims a perfect score for the expedition.

"The Indian story is different. They say that Farmers Brother, Governor Blacksnake, and Cornplanter were elsewhere with their men, and that the women, children, and old men had fled to Cornplanter Peak across the Allegheny from Jennesadaga. In the night they descended on Brodhead's advance guard and killed six, whose graves on the Grant the Cornplanters of today still show. Farther up-river, at Jimersontown, just south of Salamanca, the Indians surrounded the advance party, who entrenched themselves. Twelve soldiers were killed and buried there. At this point are still unmistakable signs on the ground of a circular earthwork. Brodhead's account of his trip is detailed until he left Warren. After that no one has been able to determine where he went and what he did besides burning towns and crops. Some students think he may have made Olean Point, much farther up the river, but the Indians say, 'No,' and it is most unlikely he went so far. A little judicious digging would help settle the point.

"Somewhere in this hullabaloo a young half-breed was gathering battle scars in behalf of the British and his own people. Born about 1740 at Conawaugus, New York, of the temporary union of an Albany Dutch Indian trader, John Abeel, and a Seneca woman, he inherited the best of both white and Indian blood.

"Although Cornplanter (or Gy-ant-wa-chia) was half white, he was all Indian. As a young man just married he had gone to his white father to ask for 'a kettle and a gun.' He was turned away with neither. From that time on he lived and thought as an Indian. Apparently he could neither read nor write and if he knew English he concealed the fact. If we remember him for the help he gave the whites, it is because he considered it the only way to help the Indians.

"He emerged from the Revolution a principal war chief of the Senecas. At a post-war Fort Pitt council he learned for the first time that the British, contrary to their solemn promises, had abandoned their Indian allies to the colonists, and from that time on he threw in his lot with the new country, believing that his people's wisest course lay in making the best possible terms with it.

"This policy was neither easy nor popular. Always there was a strong element in opposition, led by such bitter-enders as Red Jacket. Outlaw whites made his course harder by mur-

dering his people and plundering his camps. This could be borne; but the government-countenanced Indian land swindles of the early 1800's were harder to explain away. Often he doubted the wisdom of his own course.

"If his Senecas had thrown in entirely with the other Indians who through the post-Revolutionary period defeated one government force after another, the story of these parts might be quite different. But he held most of his unhappy Senecas in check. At the numerous treaties where Pennsylvania and the federal government acquired Indian land titles he was usually present, either as chief spokesman for his people or to help persuade others, often over furious opposition from other chiefs and sachems. At the request of Washington he used his influence with the Ohio and Michigan Indians to persuade them to peace; but it took Wayne's bloody work at the battle of Fallen Timbers in 1794 to convince them that Cornplanter had been right, and to quiet this frontier.

"If a statesman is one who unites in himself the vision of a prophet, the persuasive powers of a politician, and the force of a leader, Cornplanter fits the specifications as do few other Indians. He was in a way the Marshal Petain of his day, and for nearly fifty years his town of Jennesadaga on the Cornplanter Grant was his Vichy, so to speak. 'After the treaty of Fort Harmar near Marietta, Ohio, in 1789, at which Indian titles to the Erie Triangle were acquired with Cornplanter's help, General Richard Butler, one of the commissioners, wrote to President Mifflin of the Pennsylvania Supreme Executive Council suggesting a gift of 1,000 to 1,500 acres to the Seneca chief in recognition of his service and 'to fix his attachment to the State.' In February the Ohio Company of Associates had ordered a tract one mile square set aside at Marietta for Cornplanter, and this may have suggested the idea.

"The Indian story is that the commissioners at Fort Harmar had reserved for the chief a tract of 640 acres there and had given him a warrant for it, but that on his way home, the 'deed' was stolen from him. Within the last week (October, 1940), one of the Cornplanter heirs drew a map of Marietta on a piece of board to show exactly where this tract lies today, with the existing markers that bound it. For many years the heirs have tried to get it back, an attempt recently tempo-

rarily abandoned. Cornplanter in his own time, employed Hugh Brackenridge to recover it for him.

"Whatever the truth of this story, on March 24, 1789, the Council considered General Butler's recommendation and sent it on to the Assembly which passed a resolution the same day asking the Council to have 1,500 acres 'in this tract or country on Lake Erie' surveyed to Cornplanter. But Pennsylvania was in the throes of framing a new constitution, and the matter went over.

"In May, 1790, the Six Nations protested to Pennsylvania that bad white people plundered their camps. On the tenth, President Mifflin wrote to Cornplanter inviting him and two fellow-chiefs, Halftown and New Arrow, to Philadelphia in September to lay their complaints before the Assembly. As Cornplanter was starting, four drunken white men killed two of his Senecas at a tavern on Pine Creek. Word was sent at once by other whites to the Council, and for the next few months its activity in this matter was the Council's main business, evidencing the respect in which the still powerful Senecas were held. Rewards were offered for the murderers; presents of money were sent to the families of the Indians; and one emissary after another went out to labor with them. Even President Washington took a hand and sent Colonel Timothy Pickering to represent the federal government in the matter.

"Cornplanter played his usual rôle of peacemaker, and he did not get away from home until late in September. He and five others arrived in Philadelphia on October 22, 1790, bearing letters of the most flattering character from Hugh Brackenridge, Robert Galbraith of Greensburg, and General John Wilkins, Jr.

"It was not his first trip to Philadelphia. He must have recalled with special pleasure the visit of 1786 when the infant society of the Sons of St. Tammany had lionized him, escorting him from the Indian Queen Hotel to their Wigwam on the Schuylkill's banks, where, to the tune of thirteen cannon-salutes and huzzas from the two thousand assembled, Cornplanter and the senior Tammany sachem had exchanged courtesies and speeches. At its annual meeting several weeks later Miss Eliza Phile had presented the society with a portrait of Cornplanter, 'taken from the life,' to commemorate

the visit. A toast had been drunk to 'Our Brother Iontonkque or the Corn Plant'; and the second in rank of Tammany's thirteen sachems had been invested with a gorget of office bearing Iontonkque's name, thus establishing him as a patron saint of the society next below their eponym.

"Cornplanter addressed the Council on October 23, 1790, and asked for time in which to prepare a real speech. On the twenty-ninth he made it, laying out in orderly Indian fashion his grievances and suggestions one by one, concluding with a request that the lands about Buckaloons be given to his friend and interpreter, Joseph Nicholson. The Council replied the next day; provided for new coats and presents; and rather hoped the Indians would be on their way. But one of the party, Chief Great Tree, got himself wounded somehow and a Dr. Jones certified to the Council on November 5 that the chief could not travel, so the whole party stayed over to await the arrival of President Washington in Philadelphia, the new national capital. On December 29, there was an exchange of speeches between Cornplanter and Washington, and the latter's is still remembered by the Senecas because in it Washington promised them access to the courts and federal protection in their land dealings.

"During this period Cornplanter asked about his promised lands, indicating that he would prefer three tracts on the Allegheny to the 1,500 acres in the Erie Triangle. Mifflin told him that, inasmuch as the state government was about to be changed under the new constitution, the matter had best wait until the new officials took office in December.

"On January 22, 1791, Mifflin, now governor, recommended to the new Legislature the gift of the three tracts requested by Cornplanter in lieu of the 1,500 acres in the Erie Triangle. An act was accordingly passed on January 29, approved on February 1, and on the third Governor Mifflin directed a survey of the lands so designated."

One of these tracts was to include six hundred acres on the Allegheny around Cornplanter's main town of "Jenuch Shadega" and two near-by islands in the river—the present Cornplanter Grant; six hundred acres on the Allegheny's west bank, including a Delaware town, "by the Senecas called Conenugaya," now in Forest County just below West Hickory; and three hundred acres on Oil Creek including an oil spring, the present business section of Oil City.



(Photo by Walter Jack from an old crayon drawing)

Penn Line, Crawford County, an Important Community on the Meadville-Jefferson
Highway in the Last Century

Each of these tracts has an interesting history, and that of the last two is so confused as to justify, for once, an exact statement about them based on the original records in the Land Office at Harrisburg and in the several county courts.

On July 2, 1795, Cornplanter met Alexander McDowell, the district surveyor, at the Oil City tract. There "The Gift" (303 acres 87 perches with the usual allowances) was surveyed. On the fourth, the Forest County tract (613 acres 142 perches) was laid out and named "Richland." On the ninth was surveyed "Liberality Island" (66 acres 51 perches); on the tenth "Donation Island" (53 acres 67 perches); and on the twelfth, "Planters Field" (660 acres 45 perches), which, with the two islands, is today the Cornplanter Grant. All were returned on March 9, 1796. Patents for all but "Richland," the Forest County tract, were made to Cornplanter on March 16, 1796.

"Richland" never was patented to Cornplanter. By deed dated July 2, 1795, two days before it was surveyed, he had sold the tract to General John Wilkins, Jr., to whom a patent was issued on May 18, 1796. Because this tract was at the time in Allegheny County, then in Venango County, and included in Forest County only in 1866, it has been difficult to trace. In fact, after prolonged search by a number of interested persons, it has been determined only recently to be the land now included in the farm of George L. King, about three miles below West Hickory. This is important because it fixes the location of Hickory Town at this period. Anyone who has tried to nail down this elusive and often-mentioned settlement from contemporary maps and travelers' diaries knows that Hickory Town has been a hard bird to catch. "Richland" became a source of further confusion when another patent for this tract was issued on August 1, 1865, to Cornelius Curtiss, of Camden, New Jersey, a speculator, on the application of C. Heydrick. "Richland" was still in Venango County at the time; and a great many tears have been shed by sentimentalists over this robbery of the poor Indians by a "city slicker." As a matter of fact, neither Cornplanter nor his heirs ever claimed this tract; and the Indians know nothing about it. If we have tears to shed, we might prepare to shed them now for Curtiss who was haled into the Crawford County court the next year and stripped of everything he had on a levy of over a quarter of a million dollars. It is known that General John Wilkins farmed the place, for in 1798 the Philadelphia Quakers bought a yoke of oxen and a cow from him for their young missionaries working amongst the Senecas—and the cow proved so old that she was not worth driving up the river.

A tale hangs by "The Gift" at Oil City, too—a tale not yet finally told, because the Cornplanter heirs are still trying to get it back.

"On May 29, 1818, Cornplanter sold 'The Gift' to William Connelly of Venango County and William Kinnear of Center County, as tenants in common, for \$2,120. It appears that only \$250 of this was in cash; and the Indian claim is now and has always been that counterfeit money was paid. Whether this is true or not, something happened, because on October 24, 1818, William Connelly quit-claimed his undivided half back to Cornplanter for 'one-half the \$250 the consideration money to him in hand paid and the further payment of \$75 good and lawful money of Pennsylvania.' Since both Connelly and Kinnear were men of reputation, it seems more likely that the payment to Cornplanter was in some one of the many depreciated currencies then afloat, which the emphasis on 'good and lawful money of Pennsylvania' in the second deed seems to support. At any rate, Cornplanter and Kinnear appeared to be partners. But that was not the way it worked out. Apparently Cornplanter did not pay Connelly all the \$225 he owed him and the sheriff sold out his interest on Connelly's judgment, delivering a deed to Alexander McCalmont, the buyer, on November 22, 1819. But Kinnear still owed Cornplanter for the half he had bought and judgment was recovered against Kinnear in favor of Cornplanter. This judgment was transferred to Warren County after its organization in 1819, and on December 5, 1828, a jury there again found for Cornplanter and judgment against Kinnear was again awarded. The judgment was last revived by Cornplanter's administrator at No. 53 June Term 1837, Warren County. An Indian never forgets. The Cornplanter heirs remembered their claim to this tract, now become the business section of Oil City, and pursued it.

"Agitation continued until May 5, 1897, when the Pennsylvania Legislature directed the attorney general to inquire into the matter. He did; and on the twenty-first reported back that only the courts could determine it. On the same day, at the Presbyterian Church on the Grant, all the heirs assembled in person or by proxy, signed a contract with Hargest & Hargest, attorneys of Harrisburg, to prosecute the claim. I have not learned what, if anything, they did.

"However, by an Act of May 29, 1908, Congress specifically gave the Cornplanter heirs the right to bring actions in the circuit courts of the United States to recover possession of lands or to quiet titles. I have not been able to find that any action has been brought under this; but I am confident that, if and when the Cornplanter heirs get their financial wind, Oil City will be theirs, or they will know the reason why.

"The third tract is the present Cornplanter Grant in Warren County, which is now the permanent home of only about forty of the Cornplanter heirs living there near their Seneca friends and relatives on the Allegheny Reservation just over the New York state line. There are, however, nearly 550 persons with an interest in this property, whose legal status is most peculiar. The patent issued to Cornplanter, and his heirs and assigns, was like all others and conveyed the same title, except that he was not required to perfect it by settlement or payment. However, when Warren County was organized in 1819 for judicial purposes, taxes were assessed against the Grant and on one occasion the sheriff went to collect. He was received in silence in Cornplanter's house. Around the walls stood thirty of the chief's young men, each with a rifle. No word was said; but the sheriff was a smart man and could take a hint. The annoyance continued and notes were extracted from the chief which he probably thought settled the matter. When he learned that they only made it worse, he appealed once more to his old friend the governor of Pennsylvania. The response was handsome. Under date of April 2, 1822, the Legislature directed the state treasurer to pay the tax notes and all taxes due; exempted the Grant from any kind of taxes so long as Cornplanter or his heirs held it; provided heavy penalties for trespass on the property; and authorized the appointment of commissioners to interview the old chief and explain the objects of the act. On the sixth day of July, the chief met the state commissioners at Warren and delivered himself of a really good speech—the most eloquent that Warren County has ever heard, I am sure.

"Cornplanter died on February 18, 1836, and letters of administration were issued on May 29, 1837, to Robert Falconer. On August 31, the heirs petitioned the Warren County Orphans Court for a partition of the Grant, and an inquest was awarded. What became of it, I do not know. Perhaps the

court, on consideration, decided then what it formally determined later—that it had no jurisdiction. The heirs then living sold and leased parts of it as though it had been divided. Maybe they agreed amongst themselves. In any event, the Act of May 16, 1871, specifically authorized the Warren County Orphans Court to appoint commissioners to make partition on petition of a majority of the heirs. Such a petition was forthcoming, and three Quakers were appointed commissioners on June 10, 1871. It is said that all heirs were represented at the hearing, held in the schoolhouse on August 21. Allotments were made, surveyed, and mapped. On December 5 the findings were confirmed by the court. By this action the Grant was divided and everyone seemed satisfied.

“But the Act of 1871 went further. After partition, the owners were permitted to sell only to descendants of Cornplanter or to other Senecas; and the Grant was again declared exempt from taxes or from any judicial sale except to Senecas.

“This created a peculiar title and an interesting problem, both rather thoroughly explored from the state’s standpoint after the death of Marsh Pierce, Cornplanter’s grandson, on November 3, 1899. Marsh Pierce was in all respects a remarkable man. The Quakers had done well by his education. He was a builder by trade, and a forward-looking citizen. At his death he left five sons: Gibson, Oakley, Amos, Toppley O’Connell, and Windsor. On December 7, 1908, Gibson, the oldest, asked the Warren County Orphans Court for a partition of the lands amongst the five. On February 13, 1909, the other four alleged that Gibson was not Marsh’s son, and the case went to trial. The court appointed a master to take testimony. He interviewed, through an interpreter, some nineteen Indian witnesses, most of them old people. The revelation here of ways of actual Indian life in the middle 1800’s makes fascinating reading. The judge found Gibson to be Marsh’s son and awarded an inquest to make partition.

“But on June 17, 1911, Amos came into court with a motion to stay proceedings. He contended that the court lacked jurisdiction because all the parties at interest were Indians, not citizens, subject only to the laws of the Seneca Nation, whose quasi-independent existence had been recognized by Congress in 1849; and, besides, that Seneca inheritance is always through the mother’s side and white laws do

not apply. So the court appointed an auditor to consider all this. Over the following years two more judges heard the case and all decided that their court had authority in the premises, ordering the allotment to proceed. At one point the case went even to the Superior Court. On November 11, 1921, the estate property was sold for \$900 to Gibson Pierce, at the courthouse in Warren.

"At this point an Indian lawyer from the Cattaraugus Reservation stepped in and did such a good job that on November 13, 1922—fourteen years after the start—a fourth judge held all proceedings void, and decided that his court had no jurisdiction, mainly on the ground that he doubted its ability to protect the sheriff of Warren County if the Indians resisted him.

"When the federal authorities came to look into this matter in recent years, in connection with the proposed Allegheny Reservoir, or 'Kinzua Dam,' they concluded that 'insofar as the United States was and is concerned, this (Cornplanter) reservation is individual property over which the United States has no jurisdiction.' The basis for this opinion is outlined in House Document No. 300, 76 Congress, First Session, 1939.

"Just where this leaves the Grant legally it is hard to say. But the Indians get along fairly well just the same. Starting with the 1871 partition, they have recognized as heirs all descendants of Chief Cornplanter, whether the descent be through the mothers' or fathers' line. But one dear old lady rather wishes there were someone to whom she could appeal, because she thinks that a line fence in process of erection is on her land and she cannot find anyone with authority to stop it.

"The Moravian Zeisberger talked religion with the then chief of the Upper Allegheny towns in 1767; and Waterman Baldwin, a teacher, and his Bible were there as early as 1791. But educational and missionary work really started in 1798 with the arrival of three young Quakers from Philadelphia, accompanied by older brethren to set them up in business. Joel Swayne and Halliday Jackson settled down at Old Town, some nine or ten miles above Jennesadaga, where they planned to turn warriors into farmers and artisans. Henry Simmons, Jr., stayed at Jennesadaga with Cornplanter and took over the departments of morals and education. Quakers never prose-

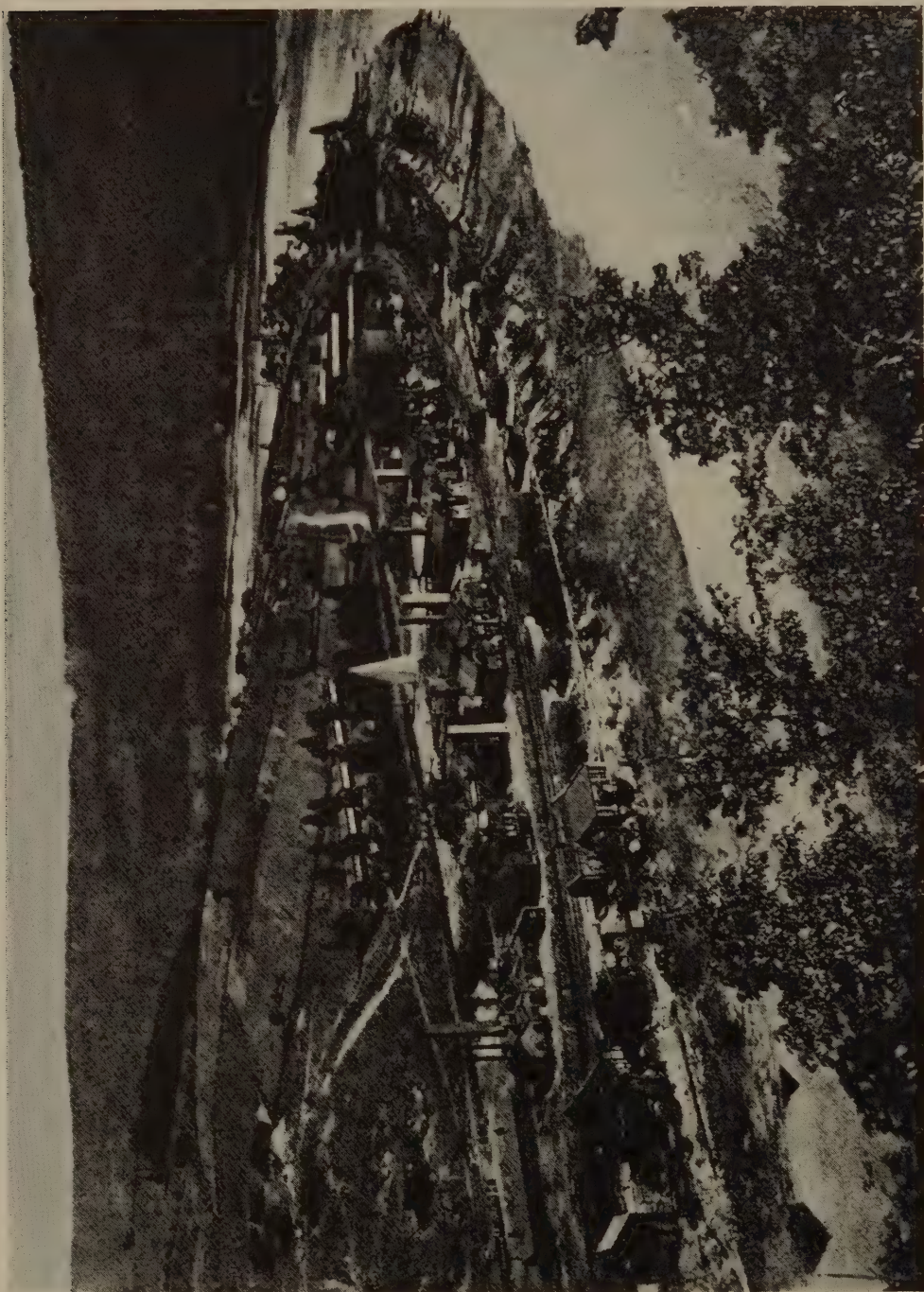
lyte. These tried to make the Indians domestic, sober and industrious by precept and example.

"But the Indians showed a strong curiosity about the Bible, especially about stories of the creation, heaven, and hell. They invited young Simmons to meet with their men in council where they questioned him closely about these things. His previous experience amongst the tame Stockbridges had taught him that Indians have no direct interest in education, since they have no use for it. But, as his job was to school them, he shrewdly used these occasions to point out that, if some of them would learn to read, they could figure out the answers for themselves. He pressed the point until they agreed to let him go to work on some of the youngsters. His first school was in Cornplanter's home, and a schoolhouse of sorts was built in the latter part of 1798. In bad weather it was full; in good, empty.

"Simmons' Bible stories were getting results, however, even though of an unexpected sort. Visions are no novelty amongst the Indians; but the current product had a strange look, as it reflected Simmons' stories fermented in the Seneca minds. Young men told about trips to a beautiful house where they were not allowed to stop. Behind it was another, but of a different sort. Indians with twisted faces met them there, and offered cups of melted lead to drink. When the visitors said, 'I can't drink melted lead,' they answered: 'Why not? You drink whiskey, don't you?' The dreamers drew the moral and took the pledge. This was what Simmons wanted; but somehow he did not like the way it came about.

"Cornplanter's half-brother, Handsome Lake, had been with him for some years, a very sick man, worn out by liquor and in bed most of the time. Although he bore one of the most honored of Seneca names, 'Ganio-dai-io,' no one paid much attention to him. But Handsome Lake had kept an ear out for what was going on.

"One day he 'passed out.' The neighbors thought he was dead and sent for Cornplanter and Simmons. The former was in no hurry to come, doubtless thinking it good riddance. Someone felt a little warmth about Handsome Lake's heart, so it was decided not to bury him at once. Some time later—about June 15, 1799—he suddenly sat up and called for everyone to come hear his vision to end all visions.



Old Siverlyville

"Simmons, Swayne, and a great crowd assembled. The whole story is written down in Simmons' diaries, just come to light. Handsome Lake told how three of the Four Angels appeared to him, each with a different berry bush. He was directed to eat, with the promise that if he did so he would live until these same berries ripened next year. Dr. Arthur C. Parker of the Rochester Municipal Museum (whose aunt was one of the few Indian teachers at the Grant) has taken down from the lips of Edward Cornplanter 'The Code of Handsome Lake,' and the New York Museum has published it in its Education Department Bulletin No. 530. So I shall not discuss it here. This vision and those that followed established Handsome Lake as the prophet of the 'new revelation,' and the Grant as holy ground for his followers.

"The 'Code' reminds one of the Koran. It is a disjointed collection of several hundred pronouncements made by the prophet at various times set down later by his disciples. Simmons' influence is very plain; although, until discovery of his diaries, the sources of the 'Code' had never been identified. It all adds up to an excellent rule of life for this people in its emphasis on sobriety, industry, and domesticity translated into terms they could understand. Simmons himself recognized that Handsome Lake's teachings were aimed at the same mark as his; but their unorthodox and strongly red coloring disturbed him. So in 1799 he retired to think over what he had started.

"Perhaps half of the Iroquois follow Handsome Lake today. The Cold Spring council house, near the Grant, is headquarters for this so-called 'pagan' element. They do not like that word, though. As Mrs. Alice White, who lives by the council house, said not long ago: 'We are not old-fashion people. The last time the gods spoke to men they spoke to Handsome Lake, so we are the new-fashion people.'

"The combined influence of the Quakers and Handsome Lake produced such salutary effects as those reported in the manuscript autobiography of John Wrenshall, preserved in the Methodist Collection at the Historical Society of Western Pennsylvania. Wrenshall was a Pittsburgh merchant. Writing about 1803, he reports that the Indians from Jennesadaga came down usually twice a year with furs, moccasins, deer hams, bearskins, and tallow, to trade with them. Wrenshall considered them 'equal to the white people by nature, in point

of integrity, and possessed as many virtues.' They refused treats of liquor, so he gave them sugar and water, which they 'took in great plenty.'

"The Quakers built mills and introduced fences and farm implements. About 1806 they acquired from the Holland Land Company a tract near Quaker Bridge, New York, where they built a school for training 'in the useful arts,' which is still in existence at Tunesassa.

"In 1814 Robert Clendenon and his wife and daughter took charge; and in 1816 Joseph Elkinton came to teach at Jennesadaga and the other towns. In those early days school was an off-and-on affair, usually reflecting cycles of Indian attraction and aversion to white ways, as when Cornplanter himself in February, 1821, ordered Elkinton to close his school and go home. This mirrored the strong feeling aroused by the Indian land swindlers of that era. However, in 1824, the Indians were asking the Quakers to reestablish their work.

"In 1856 the Warren County superintendent of schools, riding along the river bank, came across a group of Indian children from the Grant. He talked with Marsh Pierce, the head man there. Pierce secured \$175 from the Seneca Nation with which he himself built a schoolhouse, now occupied by his youngest son as a summer camp. By an Act of the Legislature, approved on April 18, 1856, \$100 per year was appropriated, to be spent by the Warren County superintendent.

"Miss Juliet Leadeth Tome (grandmother of the present very capable instructor, Miss Lucia Browne) was the first teacher. The Act of April 13, 1903, provided \$3,000 for a new schoolhouse and teacher's apartment. Annual grants have been gradually increased to \$1,500, and fifteen children are in attendance there this year (1940).

"In 1815 the Western Missionary Society sent Samuel Oldham to the Indians. Congregationalists carried the work at Jennesadaga until April 10, 1883, when the 'Allegheny and Cornplanter Presbyterian Church' was enrolled by Buffalo Presbytery. On September 17, 1885, the present church was dedicated; and on November 1, 1936, the congregation transferred to Erie Presbytery, which gives \$300 a year to its support. Rev. Paul G. Miller, of Bradford's East End Presbyterian Church, ministers. Miss Louise Gordon and Mrs. Harriett Bennet are elders.

"In early days north-bound Indians and whites left the Allegheny at Warren, mounted the ridge to a point beyond Scandia, and proceeded thence to the east down Cornplanter Run to pick up the river again at the Grant, thus cutting out the great river bend. No doubt this practice had something to do with the location of Jennesadaga at this point on the river. The Act of April 4, 1838, opened a road directly over the ridge to the river at the New York state line. This road left the old trail at the top of the ridge, leaving Jennesadaga stranded about four miles downstream.

"In 1805, the Quakers had urged the Senecas to make a road along the river from the Grant to the upper towns. This was more easily said than done: the river and the mountains are so intimate with one another for much of this way that there is little room for a road. Until this year such parts of the road as were made fell into the water every winter and were shoveled out again in the spring. Of necessity, the Grant inhabitants, including the school teacher, 'holed up' for the cold spell, except when they could cross the river ice. By Act of May 11, 1899, the Legislature gave \$50 a year for the maintenance of this road, an amount that was increased in 1913 to \$100, and then to \$300, where it remains. This money is paid to the treasurer of Elk Township and spent by its road supervisors.

"The Historical Society of Western Pennsylvania has one accomplishment to its credit for the year 1939 in this connection to which it has probably not laid claim. Its pilgrimage to the Grant that year and the attention it called to this forgotten spot, spurred the officials into building what is, in effect, an almost new road through the Grant which should be completed next summer. One never knows what a well-conducted pilgrimage cast upon the waters will bring back with it.

"In the Grant cemetery, halfway between the graves of Cornplanter and his wife, stands a monument to the chief erected by Pennsylvania under the Act of January 25, 1866. At the dedication on October 18, of that year, the Hon. James Ross Snowden delivered the principal address. The next year, in joint session on March 14, the House and Senate asked him to repeat it for them. At its conclusion this address, with other Cornplanter material, was ordered published as a public document. The monument is the first known to be erected in this

country by any public authority to any Indian; and I think the Legislature's action must, too, be without parallel. But many of these men had known Cornplanter. Their action was a sincere tribute to an unlettered Indian who, in the words of the monument's inscription, was 'distinguished for talents, courage, eloquence, sobriety and love of his tribe and race.'

"Life on the Grant goes at an easy gait. In winter there is the frozen river; and the long, flat, snowy road on which to play 'snow snake.' Ezra Jacobs, one of the Iroquois 'snow snake' champions, lives here; so the game is well played. When the teacher can get out to the stores, she goes laden with lists of dye-stuffs for the splint baskets, secret ingredients for the 'snow snake' wax, and solvents for the medicinal herbs and roots gathered in the summer and fall and worked up in the winter. Cellars are full of dried corn and squash; canned dandelion, wild onion, fruits, and berries; and jars of venison and noodles. There is plenty of wood and no one is cold.

"The Cornplanters have been church members for years, but they have not lost all interest in the council house and what goes on there. Especially as they get older the festivals draw them: Strawberry in the spring, Green Corn in the fall and New Years at the right January moon, with the Husk Faces on the fifth night. Seneca gossip and politics, too, take a lot of time. Hunting and fishing go on all year 'round, for this right is undoubtedly theirs—always reserved in grants of Indian lands.

"Most of the Cornplanter heirs are out and about, hustling for livings as teachers, preachers, lawyers, railroad men, artisans, and farmers. But here on the Grant there is no place for these things. One should keep fat and warm and well with as little work as possible so that he may have time to live.

"Windsor Pierce, youngest son of Marsh, lives in a fine house on a good farm up on the Cattaraugus, near the Thomas Indian School. In his time he has built railroad bridges, college stadiums, and what-not; he has fought in the Spanish-American War; and he has been the friend of presidents and governors, as was his illustrious ancestor. But Windsor is getting along in years now, and he likes to get back to the Grant for the summer and fall. Since Governor James came in August, 1940, many other people have come, too; so Windsor has been fixing up his old house with lumber from the gov-

ernor's adoption-ceremonial platform. But he has time, as always, to knock off for a talk. He accepts a cigarette with, 'You're getting me into bad habits.' (He is sixty-eight, and it is his first in years.)

"Old Mrs. Bucktooth has come down from the hill for water, and she stops to visit for awhile. Windsor goes out to look for a cow, as it grows dark.

"The visitor's watch says 6:00 and he must be getting along. But Windsor's clock, ticking away on the stove, says 7:50.

" 'Windsor's still on fast time, I see.'

"Mrs. Bucktooth glances at the clock and shrugs.

" 'What's the difference?' says she.

"And who shall say she is wrong?

"That is the Cornplanter Grant today—except for superficialities, much as it always has been."

Guyasuta (Kiasutha) has generally been called a Seneca chief, but the historian, C. Hale Sipe, says he was probably of the mongrel Iroquois known as the Mingoes, who inhabited the Allegheny Valley and the region to the westward. He was one of the chiefs who accompanied George Washington from Logstown to Fort LeBoeuf, when the latter went to that place in November, 1753, carrying the protest of Governor Dinwiddie, of Virginia, to St. Pierre, the commandant of the French forts. He is referred to in Washington's journal of this trip as the Hunter.

Long years afterward, Washington met Guyasuta near the mouth of the Muskingum, when, in October, 1770, accompanied by his friend, neighbor, and former companion in arms, Dr. Craik, and William Crawford, he journeyed down the Ohio Valley to examine the lands apportioned among the Virginia soldiers. Guyasuta was at his hunting camp when Washington met him. Seventeen years had matured the young ambassador to thoughtful manhood; yet Guyasuta held a perfect recollection of him. With a hunter's hospitality, he gave Washington, Dr. Craik, and Crawford a quarter of a buffalo, just killed. He insisted that they should encamp together for the night, and not wishing to detain Washington, he moved his hunting party to another camp some miles down the Ohio. Here the great Virginian and Guyasuta held long talks around the council-fire that night. During the intervening years, Guyasuta had fought against the English, in the French and Indian War, had helped Pontiac form his

great conspiracy, in 1763, and was one of the most vindictive in carrying it into terrible and bloody execution upon the English forts and settlements; while Washington, in both these conflicts, was one of the powerful leaders on the side of the English. Mr. Sipe says: "We cannot but wonder what were the subjects of conversation of Washington and Guyasuta around that council-fire."

Guyasuta was one of the western chiefs who went over to the French shortly after Braddock's defeat. At the head of a party of twenty Senecas, he visited Marquis de Vaudreuil, Governor of

Canada, at Montreal, Joncaire accompanying him as interpreter, where they were received with much ceremony, so pleasing to the Indians. Guyasuta, as the chief and orator of the Seneca delegation, addressed the Governor on this occasion. He and his warriors remained near Montreal during the winter, it being too late in the year to make the journey back to the Ohio.

The most important service Guyasuta rendered the French during the French and Indian War was leading the Indians in the attack on Major James Grant, where the Allegheny County Courthouse, in the city of Pittsburgh now stands, on September 14, 1758. When Forbes' army was advancing on Fort Duquesne in the



Soldiers and Sailors Monument, Oil City

(Holmes Crosby, Architect)

autumn of this year, and the advance, under Colonel Bouquet, had reached Loyalhanna and Ligonier, Westmoreland County, Major Grant, with a force of thirty-seven officers and eight hundred and five privates, was sent by Bouquet to reconnoiter the fort and adjacent country. Grant's instructions were not to approach too near the fort and not to attack it. The wilderness between Ligonier and Fort Duquesne was filled with Indians constantly watching the movements of Grant's little army; yet he succeeded in coming within sight of the fort without being discovered. Late at night he drew up his troops on the brow of the fatal hill in the city of Pittsburgh, which still bears his name, about a quarter of a mile from the fort.

Not having met either French or Indians on the march, and believing from the stillness of the enemy's quarters that the forces in the fort were small, Grant at once determined to make an attack. Accordingly, two officers and fifty men were directed to approach the fort and fall upon the French and Indians that might be outside. They saw none and were not challenged by the sentinels; and as they returned, they set fire to a large storehouse, but the fire was extinguished. At the break of day, September fourteenth, Grant sent Major Lewis with two hundred regulars and Virginia volunteers to take a position about a half mile back, and lie in ambush where they had left their baggage. Four hundred men were posted along the hill facing the fort, while Captain McDonald's company, with drums beating and bagpipes playing, marched toward the fort in order to draw out the garrison. The music of the drums and bagpipes aroused the garrison from their slumber, and both the French and Indians sallied out in great numbers, the latter led by Guyasuta.

The French and Indians separated into three divisions. The first two were sent under the cover of the banks of the Monongahela and Allegheny to surround the main body of Grant's troops, while the third was delayed awhile to give the others time, and then lined up before the fort as if exhibiting the whole strength of the garrison. This plan worked admirably. Captain McDonald was obliged to fall back on the main body, and at the same time, Grant found himself flanked by the detachments on both sides. A desperate struggle ensued. The Highlanders, exposed to the enemy's fire without cover, fell in great numbers. The Provincials, concealing themselves among the trees, made a good defense for awhile, but not being supported and being overpowered by numbers, were compelled to fall back. The result was that Grant's forces were overwhelmingly and ingloriously defeated. Many of his brave troops were driven into the Allegheny River and drowned. The total loss was two hundred and seventy killed, forty-two wounded, and several taken prisoners. Among the latter was Major Grant himself.

Grant's expedition was a monstrous blunder. General Forbes, with the main body of the army was as far in the rear as Bedford, and neither he nor Colonel Bouquet had any definite knowledge of the strength of the French and Indians at Fort Duquesne. In view of these facts, it seems strange, indeed, that Colonel Bouquet permitted Grant to advance into a death trap. Grant himself showed utter lack

of judgment in playing the bagpipes and beating the drums at daylight, which had only the effect of telling the enemy of his advance. Neither the French nor the Indians knew of Grant's presence until the music broke the stillness of the autumn morning. How Grant's conduct impressed the Indians was expressed by one of their chiefs in a conversation with James Smith, at that time a captive among them. This chief told Smith that the Indians believed that Grant "had made too free with spiritous liquors during the night, and had become intoxicated about daylight."

Emboldened by the defeat of Major Grant, Captain DeLingnery, then commander of Fort Duquesne, sent about one thousand French and two hundred Indians, the latter likely led by Guyasuta, against the English camp on the Loyalhanna, at Ligonier, hoping to compel them to retreat as did Dunbar after the defeat of Braddock. They attacked the camp on October twelfth, but were repulsed by Colonel James Burd, who was then in command of the camp, the English loss being twelve killed, eighteen wounded, and thirty-one missing. Colonel Bouquet was not at the camp at the time of the engagement, being at Stony Creek with seven hundred men, and a detachment of artillery.

Before Forbes' army left Ligonier, a thrilling event in the life of George Washington took place. He was a colonel in the army, and, on November twelfth, was out with a scouting party which attacked a number of the enemy about three miles from the camp, killing one and taking three prisoners, an Indian man and woman, and an Englishman, named Johnson, who had been captured by the Indians several years before, in Lancaster County. Captain Mercer, hearing the firing, was sent with a party of Virginians to the assistance of Washington. The two parties approaching each other in the dusk of the evening, each mistook the other for the enemy, and fired upon each other, killing several Virginians and wounding about a dozen others. Washington, upon recognizing the terrible mistake, rushed between the two parties, and knocked up the presented muskets with his sword.

Washington's skirmish, on November twelfth, was the last clash of arms between the French and Indians on the one side and the English on the other, in the Ohio Valley during the French and Indian War. Washington was a leading figure in the opening conflict in this war, the attack on Jumonville, May 28, 1754.

The Englishman, Johnson, gave Forbes the information relative to the conditions at Fort Duquesne that caused the general to decide to press forward against the fort at once, instead of going into winter quarters on the Loyalhanna. His army accordingly left the Loyal-

hanna on November seventeenth, finding the way to the fort strewn with the bodies of Major Grant's soldiers who had died on the retreat. On the twenty-fourth, the French set fire to Fort Duquesne and fled, and on the twenty-fifth, Forbes' army took possession of its smouldering ruins. Says Bancroft: "As the banners of England floated over the waters the place at the suggestion of Forbes, was with one voice called Pittsburg(h). It is the most enduring monument to William Pitt. America raised to his name statues that have been wrongfully broken, and granite piles of which not one stone remains upon another; but, long as the Monongahela and the Allegheny shall flow to form the Ohio, long as the English tongue shall be the language of freedom in the boundless valley which their waters traverse, his name shall stand inscribed on the gateway of the West."

Forbes' troops found many of the dead of Grant's defeat within a quarter of a mile of the fort. They also found a number of stakes driven into the ground on which were stuck the heads and kilts of the Highlanders, captured on that fateful September morning. Detachments then buried Grant's dead and the bones of those who were slain at Braddock's defeat over three years before.

On July 5, 1759, a council was held at the newly erected Fort Pitt, between George Croghan, Captain William Trent, and Captain Thomas McKee, on the one hand, and the representatives of the Six Nations, Delawares, Shawnees, and Wyandots. This was the first large gathering of Indians at Fort Pitt. Andrew Montour was the interpreter, while Colonel Hugh Mercer and the garrison were also present. The Delawares were represented by Shingas, King Beaver, Delaware George, Killbuck, and The Pipe; and the Six Nations by Guyasuta. Croghan informed the assembled chiefs of the terms of the Treaty of Easton. These were confirmed, and the Indians promised to return the captives held in their villages. The Treaty of Easton herein mentioned was executed on October 23, 1758, at the Grand Council at Easton, known as the Fourth Easton Council, which opened on October 8, 1758, with more than five hundred Indians in attendance, representing all the tribes of the Six Nations, the Delawares, Conoys, Tuteloes, and Nanticokes. Governor Denny, members of the Provincial Council and Assembly, Governor Bernard, of New Jersey, Commissioners for Indian affairs in New Jersey, Conrad Weiser, George Croghan, and a number of Quakers from Philadelphia, made up the attendance of the whites.

Three great land disputes came before this council. The first was the Albany Purchase of 1754, which caused the Delawares of the

west branch of the Susquehanna and the valleys of the Ohio and Allegheny to go over to the French. To the credit of Conrad Weiser, it must be said that he had always insisted that this was not a just purchase; that the Indians were deceived, and that the running of the lines had been greatly misrepresented. Furthermore, the Six Nations had declared to Sir William Johnson in 1755 that they would never consent to this sale, pointing out that the west branch of the Susquehanna was held by them simply in trust as a hunting ground for their cousins, the Delawares. The matter was adjusted at this treaty by Governor Denny, on behalf of the Proprietaries, telling the Six Nations that Conrad Weiser and Richard Peters would deed back to them all of the Albany Purchase west of the summits of the Allegheny Mountains, if the Six Nations would confirm the residue of the purchase. This they agreed to do and the mutual releases were executed. Another dispute considered at this council was the complaint of the Munsee Clan of Delawares (Munseys) that their lands in New Jersey had never been purchased; the offer of Governor Bernard, first of \$800, and then increased to \$1,000, to the Indians in settlement was accepted and thus this dispute was settled. The third dispute had to do with the fraudulent Walking Purchase.

Considerable difficulty was encountered at this council due to the enmity of the Iroquois toward the Delawares, and especially toward the Delaware chief, Teedyuscung, who took a prominent part in the deliberations. However, skillful diplomacy and tact on the part of Governor Denny and Conrad Weiser brought about peace and, through the efforts of Christian Frederick Post, the Ohio Indians were drawn away from the French.

The fall of Quebec, in the autumn of 1759, practically ended the French and Indian War. Then the English came to take possession of the surrendered French forts. The Indians soon found that their new masters entertained a much different attitude towards them than had the French. While the French had lavished presents upon them, the English now were much less generous in their contributions of blankets, ammunition and guns. The proud spirited western tribes were exasperated at the patronizing air of the English, and their indignation was encouraged by the Frenchmen among them.

A few years of great discontent followed, and then the great chief of the Ottawas, Pontiac, formed a conspiracy, bold in its design and masterful in its execution, to drive the English into the sea. In this plan and in its execution, he was ably assisted by Guyasuta. The Dela-

wares, Shawnees, and, in fact almost all the tribes of the great Algonquin family, and one tribe of the Six Nations, the Senecas, joined in this uprising, known as Pontiac's Conspiracy, also as the Pontiac and GUYASUTA War.

In the execution of the Pontiac and GUYASUTA War, these chiefs were ably assisted by CUSTALOGA or KUSTALOGA, a chief of the Munsee or Wolf Clan of Delawares. CUSTALOGA was living at VENANGO (Franklin) when JOHN FRAZER, the English trader, was driven from that place by the French late in the summer of 1753, and when WASHINGTON stopped there in November of that year on his way to St. Pierre, at Fort LeBoeuf. However, CUSTALOGA's principal seat was CUSTALOGA's Town, located about twelve miles above the mouth of French Creek at Franklin and near the mouth of Deer Creek, in French Creek Township, Mercer County. He also ruled over the Delawares at the town of CUSSEWAGO, or CASSEWAGO, on the site of the present town of Meadville, the county seat of Crawford County. He was one of the chiefs with whom Colonel Bouquet dealt when he made his expedition to the Muskingum in the autumn of 1764. His successor was Captain PIPE of the Wolf Clan of Delawares.

In May, 1763, war was once more let loose on the English forts and settlements. Almost every fort along the Great Lakes and the Ohio was instantly attacked. Those that did not fall under the first onslaught were resolutely besieged. On June twenty-second, Fort Presque Isle (Erie), commanded by Ensign John Christie was attacked, and all of the garrison who were not killed, were taken to Detroit, except Benjamin Gray, who escaped to Fort Pitt and gave the news. On June eighteenth, Fort LeBoeuf (Waterford, Erie County), commanded by Ensign Price, was captured; and at about the same time, Fort Venango, Franklin, commanded by Lieutenant Gordon, was burned and the entire garrison put to death. Lieutenant Gordon was tortured over a slow fire for several successive nights.

Fort Pitt was attacked on June twenty-second, and later the siege of the place was commenced. On the twenty-sixth of July a party of Indians approached the gate, displaying a flag of truce, among whom were Shingas and Turtle Heart. They were admitted, and Captain Simeon Ecuyer, the commandant, held a parley with them. The Indian delegation complained that the English were the cause of the war, saying that they had marched their armies into the country and built forts against the repeated protests of the Indians. Said the Indian speaker: "My brothers, this land is ours, and not yours." Captain

Ecuyer refused to leave the place, and told the Indians if they would not abandon the siege, he would "throw bomb shells, which will burst and blow you to atoms, and fire cannon among you loaded with a whole bag full of bullets."

The great authority on Pontiac's Conspiracy, Francis Parkman says:

"Disappointed of gaining a bloodless possession of the fort, the Indians now, for the first time, began a general attack. On the night succeeding the conference, they approached in great multitudes, under cover of the darkness and completely surrounded it; many of them crawling beneath the banks of the two rivers, which ran close to the rampart, and, with incredible perseverance, digging, with their knives, holes in which they were completely sheltered from the fire of the fort. On one side, the whole bank was lined with these burrows, from each of which a bullet or an arrow was shot out whenever a soldier chanced to expose his head. At daybreak, a general fire was opened from every side, and continued without intermission until night, and through several succeeding days. Meanwhile, the women and children were pent up in the crowded barracks, terror-stricken at the horrible din of the assailants, and watching the fire-arrows as they came sailing over the parapet, and lodging against the roofs and sides of the buildings. In every instance, the fire they kindled was extinguished. One of the garrison was killed, and seven wounded. Among the latter was Captain Ecuyer, who, freely exposing himself, received an arrow in the leg. At length, an event hereafter to be described put an end to the attack, and drew off the assailants from the neighborhood of the fort, to the unspeakable relief of the harassed soldiers, exhausted as they were by several days of unintermitted vigilance."

Fort Bedford, commanded by Captain Wendell Ourry (Uhrig) was also attacked as was Fort Ligonier, commanded by Lieutenant Archibald Blane. Indeed, terror reigned on the whole Pennsylvania frontier. From many fertile valleys rose the smoke of burning settlements. The mutilated bodies of slain settlers were torn and devoured by the hogs and wild beasts. Hundreds of families fled over the mountains to the extreme eastern settlement.

Colonel Bouquet, in command at Philadelphia, was sent with an army to the relief of Fort Pitt, composed of five hundred regulars,

lately returned from the West Indies, and two hundred rangers from Lancaster and Cumberland counties. On his way to Fort Pitt, Bouquet fought the terrible battle of Bushy Run, about a mile east of Harrison City, Westmoreland County, August 5 and 6, 1763. It is almost a



Mad Anthony Wayne Blockhouse at State Soldiers and Sailors Home, Erie

certainty that Guyasuta commanded the Indians at this bitterly contested engagement. The following description of Bouquet's advance and of the battle is, in part, from the writings of Francis Parkman, the outstanding authority on Pontiac's Conspiracy:

Bouquet, having sent agents to the frontier to collect horses, wagons, and supplies, soon after followed with the troops, and

reached Carlisle about the first of July. He found the whole country in a panic. Every building in the fort, every house, barn, and hovel in the little town, was crowded with the families of settlers, driven from their homes by the terror of the Indian tomahawk. None of the enemy, however, had yet appeared in the neighborhood, and the people flattered themselves that their ravages would be confined to the other side of the mountains.

However, it soon became evident that the avowed intention of the Indians to drive the English into the sea was no idle boast, but that a determined effort was to be made to accomplish that very purpose. The horrors of Indian warfare spread rapidly eastward, while section after section was abandoned by settlers who, men, women and children, encamped in the woods or fields, bewildered by the sudden menace, obsessed by fear and despair, enduring great sufferings, continued their flight eastward, many of whom, not content with seeking refuge at Carlisle, pushed on to Lancaster and even to Philadelphia.

The route of Bouquet's army was difficult and dangerous, much of it through a country formed by nature for ambuscades and over a road beset with all the obstructions of the forest and with constant danger of surprise attack. Passing here and there a few scattered cabins, deserted or burnt to the ground, they reached the hamlet of Shippensburg, about twenty miles from their point of departure. Here, as at Carlisle, they found a starving multitude, who had fled from the knife and the tomahawk.

Advices from the westward indicated that Fort Ligonier, situated beyond the Alleghenies, was in great danger of falling into the enemy's hands before the army could come up, the Indians having assailed it with repeated attacks. The magazine which the place contained made it of such importance that Bouquet resolved at all hazards to send a party to its relief. Thirty of his best men were chosen and ordered to push forward with the utmost speed by unfrequented routes through the forests and over the mountains. Using every precaution, and advancing by forced marches day after day, they came in sight of the fort without being discovered. It was beset by Indians and, as the party made for the gate, they were seen and fired upon; but they threw themselves into the place without the loss of a man, and Ligonier was for the time secure.

In the meantime, the army advancing with slower progress, entered a country where as yet scarcely an English settler had built his cabin. Reaching Fort Loudon, on the declivities of Cove Mountain,

they ascended the wood-uncumbered defiles beyond. Far to their right stretched the green ridges of the Tuscarora, while, in front, mountain beyond mountain rose high against the horizon. Climbing heights and descending into valleys passing the two solitary posts of Littleton and the Juniata, both abandoned by their garrisons, they came in sight of Fort Bedford, hemmed in by encircling mountains. Their arrival gave great relief to the garrison, who had long been beleaguered and endangered by a swarm of Indians, while many of the settlers in the neighborhood had been killed, and the rest driven for refuge into the fort.

Having remained encamped for three days on the fields near the fort, Bouquet resumed his march on the twenty-eighth of July, and soon passed beyond the farthest verge of civilized habitation. The whole country lay buried in foliage. Except the rocks which crowned the mountains, and the streams which rippled along the valleys, the unbroken forest, like a vast garment, invested the whole. The road was channelled through its depths, while, on each side, the brown trunks and tangled undergrowth formed a wall so dense as almost to bar the sight. Through a country thus formed by nature for ambuscades, not a step was free from danger, and no precaution was neglected to guard against surprise. In advance of the marching column moved the Provincial Rangers, closely followed by the pioneers. The wagons and cattle were in the center, guarded in front, flank, and rear by the regulars, while a rear-guard of rangers closed the line of march. Keen-eyed rifle-men of the frontier, acting as scouts, scoured the woods far in front and on either flank, so that surprise was impossible. In this order the little army toiled heavily on, over a road beset with all the obstructions of the forest, until the main ridge of the Alleghenies, like a mighty wall of green, rose up before them, and they began their zigzag progress up the woody heights, amid the sweltering heat of July. Descending from the Alleghenies, they entered upon a country less rugged and formidable in itself, but beset with constantly increasing dangers. On the second of August, they reached Fort Ligonier, about fifty miles from Bedford, and a hundred and fifty from Carlisle. The Indians who were about the place vanished at their approach; but the garrison could furnish no intelligence of the motions and designs of the enemy, having been completely blockaded for weeks. In this uncertainty, Bouquet resolved to leave behind the oxen and wagons, which formed the most cumbersome part of the convoy, since this would enable him to advance with greater celerity, and oppose a better resistance in case of attack. Thus

relieved, the army resumed its march on the fourth, taking with them three hundred and fifty pack horses and a few cattle, and at nightfall encamped at no great distance from Ligonier. Within less than a day's march in advance, lay the dangerous defiles of Turtle Creek, a stream flowing at the bottom of a deep hollow, flanked by steep declivities, along the foot of which the road at that time ran for some distance. Fearing that the enemy would lie in ambush at this place, Bouquet resolved to march on the following day as far as a small stream called Bushy Run, to rest here until night, and then, by a forced march, to cross Turtle Creek under cover of darkness.

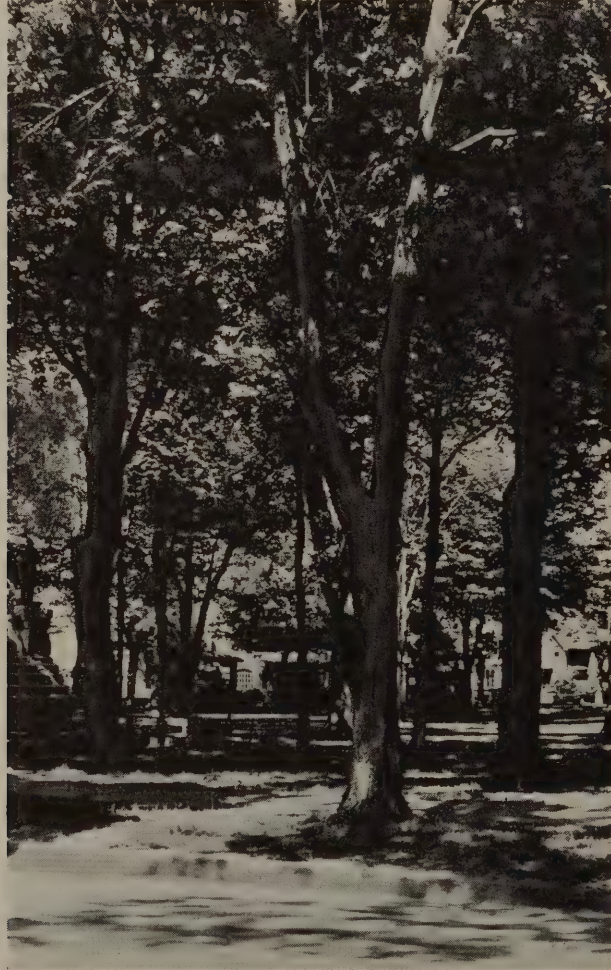
On the morning of the fifth, the tents were struck at an early hour, and the troops began their march through a country broken with hills and deep hollows, everywhere covered with the tall dense forest, which spread for countless leagues around. By one o'clock, they had advanced seventeen miles, and the guides assured them that they were within half a mile of Bushy Run, their proposed resting place. The tired soldiers were pressing forward with renewed alacrity, when suddenly the report of rifles from the front sent a thrill along the ranks; and, as they listened, the firing thickened into a fierce sharp rattle, while shouts and whoops, deadened by the intervening forest, showed that the advanced guard was hotly engaged. The two foremost companies were at once ordered forward to support it; but far from abating, the fire grew so rapid and furious as to argue the presence of an enemy at once numerous and resolute. At this, the convoy was halted, the troops formed into line, and a general charge ordered. Bearing down through the forest with fixed bayonets, they drove the yelping assailants before them, and swept the ground clear. But at the very moment of success, a fresh burst of whoops and firing was heard from either flank, while a confused noise from the rear showed that the convoy was attacked. It was necessary instantly to fall back for its support. Driving off the assailants, the troops formed in a circle around the crowded and terrified horses. Though they were new to the work, and though the numbers and movements of the enemy, whose yelling resounded on every side, were concealed by the thick forest, yet no man lost his composure; and all displayed a steadiness which nothing but implicit confidence in their commander could have inspired. And now ensued a combat of a nature most harassing and discouraging. Again and again, now on this side and now on that, a crowd of Indians rushed up, pouring in a heavy fire, and striving, with furious outcries, to break into the circle. A well directed volley met them, followed by a steady charge of the bayonet. They never

waited an instant to receive the attack, but, leaping backwards from tree to tree, soon vanished from sight, only to renew their attack with unabated ferocity in another quarter. Such was their activity that very few of them were hurt, while the English went on, without intermission for seven hours, until the forest grew dark, with approaching night. Upon this, the Indians gradually slackened their fire, and the exhausted soldiers found time to rest.

It was impossible to change their ground in the enemy's presence and the troops were obliged to encamp upon the hill where the combat had taken place, though not a drop of water was to be found there. Fearing a night attack, Bouquet stationed numerous sentinels and outposts to guard against it, while the men lay down upon their arms, preserving the order they had maintained during the fight. Having completed the necessary arrangements, Bouquet, doubtful of surviving the battle of the morrow, wrote to Sir Jeffrey Amherst, in a few clear, concise words, an account of the day's events. His letter concludes as follows: "Whatever our fate may be, I thought it necessary to give your excellency this early information, that you may, at all events, take such measures as you will think proper with the provinces, for their own safety, and the effectual relief of Fort Pitt; as, in case of another engagement, I fear insurmountable difficulties in protecting and transporting our provisions, being already so much weakened by the losses of this day, in men and horses, besides the additional necessity of carrying the wounded, whose situation is truly deplorable."

The condition of these unhappy men might well awaken sympathy. About sixty soldiers, besides several officers, had been killed or disabled. A space in the center of the camp was prepared for the reception of the wounded, and surrounded by a wall of flour-bags from the convoy, affording some protection against the bullets which flew from all sides during the fight. Here they lay upon the ground, enduring agonies of thirst, and waiting, passive and helpless, the issue of the battle. Deprived of the animating thought that their lives and safety depended on their own exertions; surrounded by a wilderness, and by scenes to the horror of which no degree of familiarity could render the imagination callous, they must have endured mental sufferings, compared to which the pain of their wounds was slight. In the probable event of defeat, a fate inexpressibly horrible awaited them; while even victory would by no means insure their safety, since any great increase in their numbers would render it impossible for their comrades to transport them. Nor was the condition of those who had hitherto escaped an enviable one. Though they were about equal in

numbers to their assailants, yet the dexterity and alertness of the Indians, joined to the nature of the country, gave all the advantages of a greatly superior force. The enemy were, moreover, exulting in the fullest confidence of success; for it was in these very forests that,



City Park, Corry

eight years before, they well-nigh destroyed twice their number of the best British troops. Throughout the earlier part of the night, they kept up a dropping fire upon the camp, while, at short intervals, a wild whoop from the thick surrounding gloom told with what fierce eagerness they waited to glut their vengeance on the morrow. The camp remained in darkness, for it would have been highly dangerous to build fires within its precincts, which would have served to direct

the aim of the lurking marksmen. Surrounded by such terrors, the men snatched a disturbed and broken sleep, recruiting their exhausted strength for the renewed struggle of the morning.

With the earliest dawn of day, and while the damp, cool forest was still involved in twilight, there rose around the camp a general burst of those horrible cries, which form the ordinary prelude of an Indian battle. Instantly from every side at once, the enemy opened their fire, approaching under cover of the trees and bushes, and leveling with a close and deadly aim. Often, as on the previous day, they would rush up with furious impetuosity, striving to break into the ring of troops. They were repulsed at every point; but the English, though constantly victorious, were beset with undiminished perils, while the violence of the enemy seemed every moment on the increase. True to their favorite tactics, they would never stand their ground when attacked, but vanish at the first gleam of the leveled bayonet, only to appear again the moment the danger was past. The troops, fatigued by the long march and equally long battle of the previous day, were maddened by the torments of thirst, more intolerable, says their commander, than the fire of the enemy. They were fully conscious of the peril in which they stood, of wasting away by slow degrees beneath the shot of assailants at once so daring, so cautious, and so active, and upon whom it was impossible to inflict any decisive injury. The Indians saw their distress, and pressed them closer and closer, redoubling their yells and howlings, while some of them sheltered behind trees, assailed the troops, in bad English, with abuse and derision.

Meanwhile the interior of the camp was a scene of confusion. The horses, secured in a crowd near the intrenchment which covered the wounded, were often struck by the bullets, and wrought to the height of terror by the mingled din of whoops, shrieks, and firing. They would break away by half scores at a time, burst through the ring of troops and the outer circle of assailants, and scour madly up and down the hillsides; while many of the drivers, overcome by the terrors of a scene in which they could bear no active part, hid themselves among the bushes and could neither hear nor obey orders.

It was now about ten o'clock. Oppressed with heat, fatigue, and thirst, the distressed troops still maintained a weary and wavering defense, encircling the convoy in a yet unbroken ring. They were fast falling in their ranks, and the strength and spirits of the survivors had begun to flag. If the fortunes of the day were to be retrieved, the effort must be made at once; and happily the mind of the commander was equal to the emergency. In the midst of the confusion he con-

ceived a stratagem alike novel and masterly. Could the Indians be brought together in a body, and made to stand their ground when attacked, there could be little doubt of the result; and to effect this object, Bouquet determined to increase their confidence, which had already mounted to an audacious pitch. Two companies of infantry, forming a part of the ring which had been exposed to the hottest fire, were ordered to fall back into the interior of the camp, while the troops on either hand joined their files across the vacant space, as if to cover the retreat of their comrades. These orders given at a favorable moment, were executed with great promptness. The thin line of troops who took possession of the deserted part of the circle, were, from their small numbers, brought closer in towards the center. The Indians mistook these movements for a retreat. Confident that their time was come, they leaped up on all sides, from behind the trees and bushes, and, with infernal screeches, rushed headlong toward the spot, pouring in a most heavy and galling fire. The shock was too violent to be long endured. The men struggled to maintain their posts, but the Indians seemed on the point of breaking into the heart of the camp, when the aspect of affairs suddenly reversed. The two companies, who had apparently abandoned their position, were in fact destined to begin the attack; and they now sallied out from the circle at a point where a depression in the ground, joined to the thick growth of trees, concealed them from the eyes of the Indians. Making a short detour through the woods, they came round upon the flank of the furious assailants, and discharged a deadly volley into their very midst. Numbers were seen to fall; yet though completely surprised, and utterly at a loss to understand the nature of the attack, the Indians faced about with the greatest intrepidity, and boldly returned the fire. But the Highlanders, with yells as wild as their own, fell on them with the bayonet. The shock was irresistible, and they fled before the charging ranks in a tumultuous throng. Orders had been given to two other companies, occupying a contiguous part of the circle, to support the attack whenever a favorable moment should occur; and they had therefore advanced a little from their position, and lay close crouched in ambush. The fugitive multitude, pressed by the Highlanders' bayonets, passed directly across their front, upon which they rose and poured among them a second volley, no less destructive than the former. This completed the rout. The four companies, uniting, drove the flying savages through the woods, giving them no time to rally or reload their empty rifles, killing many, and scattering the rest in hopeless confusion.

While this took place at one part of the circle, the troops and the savages had still maintained their respective positions at the other; but when the latter perceived the total rout of their comrades, and saw the troops advancing to assail them, they also lost heart, and fled. The discordant outcries which had so long deafened the ears of the English soon ceased altogether, and not a living Indian remained near the spot. About sixty corpses lay scattered over the ground. Among them were found those of several prominent chiefs, while the blood which stained the leaves of the bushes showed that numbers had fled severely wounded from the field. The soldiers took but one prisoner, whom they shot to death like a captive wolf. The loss of the English in the two battles surpassed that of the enemy, amounting to eight officers and one hundred and fifteen men.

Having been for some time detained by the necessity of making litters for the wounded, and destroying the stores which the flight of most of the horses made it impossible to transport, the army moved on, in the afternoon, to Bushy Run. Here they had scarcely formed their camp, when they were again fired upon by a body of Indians, who, however, were soon repulsed. On the next day, they resumed their progress towards Fort Pitt, distant about twenty-five miles, and though frequently annoyed on the march by petty attacks, they reached their destination, on the tenth, without serious loss. It was a joyful moment, both to the troops and to the garrison. The latter, it will be remembered, were left surrounded and hotly pressed by the Indians, who had beleaguered the place from the twenty-eighth of July to the first of August, when, hearing of Bouquet's approach, they had abandoned the siege, and marched to attack him. From this time, the garrison had seen nothing of them until the morning of the tenth, when, shortly before the army appeared, they had passed the fort in a body, raising the scalp-yell, and displaying their disgusting trophies to the view of the English.

The battle of Bushy Run was one of the best contested actions ever fought between white men and Indians. If there were any disparity of numbers, the advantage was on the side of the troops, and the Indians had displayed throughout a fierceness and intrepidity matched only by the steady valor with which they were met. In the provinces, the victory excited equal joy and admiration, more especially among those who knew the incalculable difficulties of an Indian campaign. The assembly of Pennsylvania passed a vote expressing their high sense of the merits of Bouquet, and of the important service

which he had rendered to the province. He soon after received the additional honor of the formal thanks of the king.

In many an Indian village, the women cut away their hair, gashed their limbs with knives, and uttered their dismal howlings of lamentation for the fallen. Yet though surprised and dispirited, the rage of the Indians was too deep to be quenched, even by so signal a reverse, and their outrages upon the frontier were resumed with unabated ferocity. Fort Pitt, however, was effectually relieved, while the moral effect of the victory enabled the frontier settlers to encounter the enemy with a spirit which would have been wanting, had Bouquet sustained a defeat.

As to the causes of Pontiac's War, the able authority on Pennsylvania Indian history, C. Hale Sipe has the following to say:

"The causes of Pontiac's War, as set forth in all histories, dealing with the subject, so far as the author has been able to find, except Dr. George P. Donahoo's "Pennsylvania—A History," are about as follows: That, when the English entered the region between the Allegheny Mountains and the Mississippi River, upon the expulsion of the French therefrom, the Indians of this region soon found that their new masters had a very different attitude towards them than had the French; that the English were less sociable and did less fraternizing with the Indians than did the French; that the English wanted to make settlements, whereas the French were content with trading; that the English were less lavish in presents than were the French, and gave the Indians less for their skins and furs than did the French; and that the English let them have guns, ammunition and blankets with such a sparing hand that the Indians suffered greatly from the parsimony of the English. For these reasons, say these histories, the proud-spirited western tribes, exasperated at the patronizing air of the English, and their indignation encouraged by the few Frenchmen still among them, rose in savage wrath, under the leadership of Pontiac, in an effort to drive the hated English into the sea. Truly, these are causes of Pontiac's War; but the principal cause is not found among them.

"The purpose of this history being to tell the truth, whether it hurts or not, let us now consider the principal cause of Pontiac's War:

"1. When the French invaded the valleys of the Ohio and

Allegheny, in 1753, Tanacharison, the deputy of the Six Nations, ordered them to depart from these lands as the territory of the Six Nations. This warning, which was given three times, as was the custom of the Iroquois before declaring war, has been pointed out.

"2. The Six Nations then made an alliance with the English to assist in driving the French from the valleys of the Ohio and Allegheny, with the understanding that, upon the expulsion of the French, the English would withdraw from this region; and Tanacharison, Scarouady, Canachquasy, Seneca George, The Belt of Wampum, and other chiefs of the Six Nations, relying on the promises and agreements of the English, faithfully served the English interest.

"3. From the beginning of the French invasion, in 1753 to the treaty of peace between England and France, in February, 1763, the Six Nations and their tenants in the valleys of the Ohio and Allegheny, the Delawares and Shawnees, never for an instant wavered in their demand that both the English and the French remain east of the Allegheny Mountains.

"4. The title of the Six Nations to the valleys of the Ohio and Allegheny was clearly acknowledged by the terms of many treaties, especially that of Albany, in July, 1754, as stated by Governor Hamilton of Pennsylvania to the Colonial Assembly, on August 7th, 1754, as follows: 'You will clearly perceive that the Lands on the River Ohio do yet belong to the Indians of the Six Nations.' ("Col. Rec.," Vol. VI, page 135.)

"5. Nor in any treaty after the Albany treaty of July, 1754, did the English Crown and the English Colonies in America deny that the Six Nations were the owners of the valleys of the Ohio and Allegheny and the Shawnees and Delawares tenants thereof by permission of the Six Nations. On the contrary, these facts were acknowledged.

"6. On November 27th, 1758, when Christian Frederick Post, after peace had been made with the Delawares and Shawnees at the council at Easton in October of that year, and just a few days after the fall of Fort Duquesne, was conferring with King Beaver and other chiefs at Kuskuskies, the matter of the occupation of the Ohio came up, and King Beaver, in no uncertain terms, let Post know that the Dela-

wares and other tribes of the western region expected the English to keep their word and withdraw their military forces from the valleys of the Ohio and Allegheny after the expulsion of the French from the region west of the Allegheny Mountains. The promise of the English to withdraw east of the Alleghenies was the condition upon which the peace message of Post was accepted.

"7. When Post, a few days later, reported to Colonel Henry Bouquet, at the ruins of Fort Duquesne, these statements of King Beaver, Bouquet was much displeased, and insisted that Post endeavor to get King Beaver and his associate chiefs to change their minds about the withdrawal of the English forces. Post then asked King Beaver, Shingas and Ketiuskund whether they had any alteration to make in their statement. These three chiefs, representing the Delawares and Six Nations in the valleys of the Ohio and Allegheny, replied that they 'would alter nothing.' Said they: 'We have told them three times to leave the place; but they insist upon remaining here; if, therefore, they will be destroyed by the French and the Indians, we cannot help them.' (See Post's journal of his second journey to the Ohio, under dates of December 3d, to 7th, 1758.)

"Also, on December 4th and 5th, 1758, Colonel Henry Bouquet, in a council held at this place with the chiefs of the Delawares, told King Beaver and his associates that the British did 'not come to take possession of your hunting Country in a hostile manner.' (See "Pa. Archives," Vol. III, page 572.)

"8. On January 3d, 1759, Colonel Hugh Mercer, commandant at Fort Pitt, held a council at that place with nine chiefs of the Six Nations, Shawnees and Delawares, in which the chiefs asked whether the English proposed to keep their promise and withdraw from the valleys of the Ohio and Allegheny after the expulsion of the French, to which Colonel Mercer replied: 'Our great Man's words are true; as soon as the French are gone, he will make a Treaty with all the Indians and then go home, but the French are still here.' ("Col. Rec.," Vol. VIII, page 296.)

"9. On February 9th, 1759, a council was held at Philadelphia between General Forbes and some Indian chiefs who had come from the Indian town of Buccaloons, on the Alle-

gheny at the mouth of Brokenstraw Creek, in Warren County. These chiefs had first come to Pittsburgh to see the General, but finding that he had gone to Philadelphia, came to the latter place to see him. These Indians were very anxious to learn whether the English intended to keep their word and withdraw from the Ohio and Allegheny. General Forbes, too ill to speak with them personally, sent them his reply by Lieutenant James Grant, as follows:

"The General (Forbes) knows that the French have told the Indians that the English intend to cheat them out of their lands on the Ohio, but this, he assures you, is false. The English have no intention to make settlements in your Hunting Country beyond the Allegheny Hills, unless they shall be desired for your convenience to erect some store houses in order to establish and carry on a trade, which they are ready to do on fair and just terms.' ("Col. Rec.," Vol. VIII, page 269.)

"10. On July 5th to 9th, 1759, at the great council at Fort Pitt between Captain William Trent, Captain Thomas McKee and George Croghan, then Deputy Indian Agent, representing the English, and Guyasuta, King Beaver, Shingas, Captain Pipe, Delaware George, Killbuck and other chiefs of the Six Nations, Delawares, Shawnees and Wyandots, Croghan solemnly promised the chiefs as follows:

"And I assure you, as soon as the Enemy is drove out of your Country, which I expect you will be assisting in, that the General will depart your Country after securing our trade with you and our Brethren to the Westward. In confirmation of what I have said I give you this Belt.' ("Col. Rec.," Vol. VIII, page 389.)

"11. On August 12th, 1760, General Monckton held a council at Fort Pitt with King Beaver, Delaware George, Teedyuscung and many other chiefs of the Delawares, Shawnees, Six Nations, Ottawas, Wyandots and other tribes of the region between the Allegheny Mountains and the Mississippi River, in which he solemnly assured the assembled chiefs as follows:

"I do assure all the Indian Nations that his Majesty has not sent me to deprive any of you of your lands and property.' ("Pa. Archives," Vol. III, page 745.)

"12. In August, 1762, a treaty was held at Lancaster, in which Governor Hamilton, of Pennsylvania, paid Teedyuscung two hundred Spanish dollars and goods of the value of two hundred pounds to withdraw his charge of fraud with reference to the Walking Purchase of 1737. This very important treaty was attended by five hundred and fifty-seven Indians from nearly all the tribes associated with the English.



Pennsylvania State Fish Hatchery, Near Tionesta

During the session of August 27th, Kinderuntie, the war chief of the Senecas, denied the request of Governor Hamilton to erect storehouses on the West Branch of the Susquehanna by reminding him, much to the Governor's embarrassment, as follows:

"'You may remember you told me, when you were going to Pittsburgh, you would build a fort against the French, and you told me you wanted none of our lands; our Cousins (the Delawares) know this, and that you promised to go away as soon as you drove the French away, and yet you stay there, and build Houses, and make it stronger and stronger every day; for this reason we entirely deny your request.' ("Col. Rec.," Vol. VIII, pages 766-67.)

"13. Preliminaries of peace between England and France were signed, November 3d, 1762. Then at the Treaty of Paris, February 10, 1763, the French surrendered to the English all possessions to which they laid claim, in North America, except the territory around New Orleans. For several years prior to the signing of this treaty, the English had been marching into the lands on the Ohio, at Niagara, at Detroit and at other places, taking formal possession without purchase from the Indian occupants of the region and without their consent, and erecting stronger forts than the French had surrendered. English settlers pushed over the Allegheny Mountains from Eastern Pennsylvania and Virginia, and laid out for themselves plantations in the valley of the Ohio, some of them even with permission from the military authorities, though the lands were not open to lawful settlement. All these things the English did, in violation of their ten years of promising to the contrary and against the Indians' most solemn protestations.

"But the Indians lived up to their agreements. Hear George Croghan, a thoroughly qualified and competent witness, testifying against his own interest and therefore much more entitled to be believed than if he were testifying for his own interest:

"'It may be thought and said by some that the Indians are a faithless and ungrateful set of Barbarians, and will not stand by any agreements they make with us; but it is well known that they never claimed any right to a Tract of Country, after they had sold it with the consent of their Council, and received any consideration, tho' never so trifling,'" ("Pa. Archives," Second Series, Vol. VI, page 620.)

Such is the story of British perfidy and dishonor. The British forgot their promises and treaties as soon as they made them. But the Indian never forgot a promise, a treaty, a kindness, or, an injury. The strongest love of his heart was the love for the lands he considered his own, as the gift of the Great Spirit; and the fiercest passion of his heart was love of revenge. Now that the Indians' loved home and hunting grounds were invaded in violation of solemn promises and formal treaties, it is no wonder that the storm which had been brewing for ten years, broke with fury in the summer of 1763—it is no

wonder that the warriors of Pontiac, Guyasuta and Custaloga rose in savage wrath in an effort to drive the English into the sea, and that the Pennsylvania valleys ran red with the blood of the pioneers. Pontiac's uprising was, therefore, not a "conspiracy," but a war brought about by the English breaking their promises and treaties with the Indians—a war in which the Indians attempted to drive out and destroy the perfidious invader of their homes and hunting grounds. (See Dr. George P. Donehoo's "Pennsylvania—A History," Vol. II, pages 864 to 870 and 882.)

When Colonel Bouquet was preparing to lead his army over the mountains to the relief of Forts Bedford, Ligonier, and Pitt, General Sir Jeffrey Amherst, then in command of all the English troops in the colonies, wrote him as follows: "I wish to hear of no prisoners, should any of the villians be met with in arms. . . . Could it not be contrived to send the small-pox among those disaffected tribes of Indians?" To this Bouquet replied: "I will try to inoculate them with some blankets, and take care not to get the disease myself. As it is a pity to expose good men against them, I wish we could use the Spanish method, to hunt them with English dogs who would, I think, effectually extirpate or remove that vermin." Then Amherst replied: "You do well to try to inoculate the Indians by means of blankets, as well as to try every other method that can serve to extirpate this execrable race."

Parkman calls attention to the fact that, while there is no direct evidence that Bouquet carried into effect the shameful plan of inflicting the Indians with smallpox, yet a few months after Amherst's suggestion, this disease made havoc among the tribes of the Ohio. Also, on June twenty-fourth, Captain Ecuyer, the commandant at Fort Pitt, after narrating the fact that he and Alexander McKee held a short parley that day with Turtle Heart and another Delaware chief who had come to the fort for the purpose of terrifying the garrison by reports of great numbers of Indians marching against the place, noted the following in his journal: "Out of our regard to them (Turtle Heart and his companion), we gave them two blankets and a handkerchief out of the Small-pox Hospital. I hope it will have the desired effect."

On July 7, 1764, Pennsylvania offered a bounty for Indian scalps, even the scalps of children, "for the better carrying on of offensive operations against our Indian enemies," as follows:

"For every male Indian enemy above ten years old, who shall be taken prisoner and delivered at any forts garrisoned

by the troops in the pay of this Province, or at any of the county towns, to the keeper of the common gaols there, the sum of one hundred & fifty Spanish dollars, or pieces of eight; for every female Indian enemy taken prisoner and brought in as aforesaid, and for every male Indian enemy ten years old, or under, taken prisoner, and delivered as aforesaid, the sum of one hundred and thirty pieces of eight; for the scalp of every male Indian enemy above the age of ten years, produced as evidence of their being killed, the sum of one hundred and thirty-four pieces of eight; and for the scalp of every female Indian enemy above the age of ten years, produced as evidence of their being killed, the sum of fifty pieces of eight; and that there shall be paid to every officer, or officers, soldier, or soldiers, as are or shall be in the pay of this province, who shall take, bring in, and produce any Indian enemy prisoner, or scalp, as aforesaid, one half of the said several and respective premiums & bounties."

As a result of scalp bounties, "secret expeditions," say the "Pennsylvania Archives," "were set on foot by the inhabitants which were more effectual than any sort of defensive operations."

Guyasuta, in August, 1764, attended a conference with Colonel Bradstreet, near Erie, in which Bradstreet concluded a peace with the Delawares and Shawnees. However, Colonel Bouquet, upon learning of this fact, while at Fort Loudon, Franklin County, and perceiving that the Delawares and Shawnees were not sincere in their intentions, as they continued their depredations, refused to ratify the treaty, and pushed on with his army to the Muskingum, where he compelled Guyasuta and the other chiefs of the western tribes to surrender the prisoners captured during the Pontiac's war, as well as many captured during the French and Indian War. Bouquet dealt sternly with the chiefs, and they were glad to make peace. More than two hundred prisoners were yielded up to Bouquet by Guyasuta and his associate chiefs. Some of the captives had been among the Indians since the early days of the French and Indian War, and in many cases, it was with extreme reluctance that they consented to accompany Bouquet's army back to the Pennsylvania settlements. The Indians had become greatly attached to these captives, and had adopted them into their families. They shed tears when they were compelled to deliver them up.

However, Colonel Bouquet, on account of the lateness of the season was obliged to return to Pennsylvania without having secured all the prisoners held by the Shawnees. On November twelfth, he held a conference with a number of their chiefs, among whom were Nimwha and Red Hawk. At this conference, he took hostages from the Shawnees, and laid them under the strongest obligation for the delivery of the rest of the prisoners at Fort Pitt in the ensuing spring. These hostages escaped soon afterwards, thus giving reason to doubt the sincerity of the intentions of the Shawnees with respect to performance of their promises. But to the credit of the Shawnees it must be said that they punctually fulfilled all their promises. Ten of the chiefs, with about fifty of their warriors, met George Croghan, then deputy agent to Sir William Johnson, at Fort Pitt, on May 9, 1765, and delivered the remainder of their prisoners and gave every assurance of their firm intentions to preserve the peace.

Guyasuta attended the great council at Fort Pitt which opened on May 10, 1765, relative to resuming trade relations between Pennsylvania and the Western Indians after Pontiac's War. He was one of the principal speakers on this occasion and represented the Senecas. George Croghan, as deputy agent of Indian affairs, had arrived at the fort on February twenty-eighth, accompanied by Lieutenant Alexander Frazer. At the council Guyasuta made the following speech:

"When you first came to drive the French from this place, the Governor of Pennsylvania sent us a Message that we should withdraw from the French, & that when the English was settled here, we should want for nothing. It's true, you did supply us very well, but it was only while the War was doubtful, & as soon as you conquer'd the French you did not care how you treated us, as you did not then think us worth your Notice; we request you may not treat us again in this manner, but now open the Trade and do not put us off with telling us you must first hear from your great man before it can be done. If you have but little goods, let us have them for our skins, and let us have a part of your rum, or we cannot put dependence on what you tell us for the future."

To the above speech of Guyasuta and the speeches of the other chiefs, Croghan faithfully promised that trade relations would be opened without delay.

When Croghan set out from Philadelphia for Fort Pitt, he gave a pass for a large number of wagons and pack horses belonging to Boyn-

ton and Wharton of Philadelphia, loaded with guns, knives, blankets, and other goods intended as presents for the Indians at Fort Pitt. However, the people of Cumberland County and the valley of the Conococheague, upon whom such terrible atrocities had been so recently committed by the Indians, determined to prevent these warlike supplies being carried to the Indians. Accordingly, on March sixth, when the pack train had reached Sidling Hill, about seventeen miles beyond Fort Loudon, sixty-three horse loads were either burned or pillaged by the force of infuriated settlers, since known as the "Sidling Hill Volunteers," led by Colonel James Smith, who, it will be remembered, was a captive at Fort Duquesne at the time of Braddock's defeat. This action of Smith and his followers obstructed communication with Fort Pitt for some time.

Guyasuta also attended the great conference held at Fort Pitt from April 26 to May 9, 1768, for the purpose of adjusting the difficulties due to the fact that many settlements had been made in the valleys of the Youghiogheny and the Monongahela on land not purchased from the Indians. This conference led to the purchase at Fort Stanwix (Rome, New York), November 5, 1768, previously mentioned.

In May, 1774, Guyasuta attended a conference with George Crogan at Ligonier. On October 27, 1775, he was the principal speaker at the treaty held at Fort Pitt between the Commissioners of the Continental Congress and a few of the chiefs of the Senecas, Delawares, Shawnees, and Wyandots, in an effort to secure their neutrality during the Revolutionary War. He represented the Iroquois, or Mingoes, in the Allegheny Valley and Ohio. As an Iroquois, he assumed to speak for all the Western tribes, and thereby aroused the anger of White Eyes, the great Delaware chief, who thereupon declared the absolute independence of the Delawares. This council was far from harmonious, but the chiefs declared their intention to remain neutral; and Guyasuta promised to use his influence at the Great Council of the Iroquois in New York, to obtain a decision in favor of peace.

In May, 1776, Sir Guy Johnson and Colonel John Butler held a great council with the Iroquois chiefs at Fort Niagara, New York, when the overwhelming majority of the sachems voted to accept the war hatchet against the Americans. Guyasuta then came from his home near Sharpsburg, Allegheny County, to a council at Fort Pitt on July sixth of that year, and declared that neither the English nor the Americans should be permitted to pass through the territory of the

Six Nations. This was a conference between Majors Trent and Ward, and Captain Neville, on the one hand; and Guyasuta, Captain Pipe, a Delaware chief, Shade, a Shawnee chief, and other Western Indians. The object of the conference seems to have been to enable Guyasuta, as the outstanding representative of the Six Nations in the Ohio and Allegheny valleys, to define his position in the struggle between England and her American Colonies.

"I am appointed," said Guyasuta, "by the Six Nations to take care of this country, that is of the nations on the other side of the Ohio (meaning the present Allegheny River), and I desire you will not think of an expedition against Detroit, for, I repeat, we will not suffer an army to pass through our country." Captain Neville replied that the Americans would not invade Guyasuta's domain, unless the British should try to come through the same towards Fort Pitt. Detroit was then in the possession of the British, and, no doubt, as an actual ally of the British, it was the task assigned Guyasuta to prevent an advance against this post by the Americans.

At any rate soon thereafter this great chief of the Senecas took up arms against the Americans, and led many a bloody expedition against the settlements of western Pennsylvania. During the summers of 1778 and 1779 he was especially active against the settlements of New York and Pennsylvania, and decorated the Seneca towns of the upper Allegheny with the scalps of hundreds of settlers.

After the Revolutionary War, Guyasuta lived in the vicinity of Fort Pitt. As old age crept upon him, he became virtually destitute. In 1790 he sent a pathetic message to the Quakers of Philadelphia, addressing them as the sons of his beloved "brother Onas" and imploring their assistance. Said he: "When I was young and strong, our country was full of game which the good Spirit sent for us to live on. The lands which belonged to us were extended far beyond where we hunted. Hunting was then not tiresome; it was diversion; it was pleasure. When your fathers asked land from my nation, we gave it to them, for we had more than enough. Guyasuta was among the first people to say, 'give land to our brother Onas for he wants it'; and he has always been a friend to Onas and his children. But you are too far off to see him. Now he is grown old. He is very old and he wonders at his own shadow; it has become so little. He has no children to take care of him and the game is driven away by the white people. . . . I have no other friends but you, the children of our beloved Brother Onas."

From December, 1792, to the middle of April, 1793, General Anthony Wayne trained the Legion of the United States at a place on the Ohio River, twenty miles below Pittsburgh, since known as Legionville. Before leading the Legion from that place against the Western Indians, he was visited by Guyasuta.

General James O'Hara bought Guyasuta's interest in the large tract of land on the west side of the Allegheny near Sharpsburg, Allegheny County, and gave the old chief a home on the plantation during his declining years. Here he died some time in the closing years of the eighteenth century, and his body was placed in the old Indian mound on the estate by General O'Hara. Guyasuta station on the Pennsylvania Railroad nearby bears the name of this noted chieftain.

The claim has been made, however, that Guyasuta died at Custaloga's Town on French Creek about twelve miles above Franklin, and was buried there. (See "Frontier Forts of Pennsylvania," Vol. II, pages 322-23.)

Pontiac, unsuccessful in his first attempt to drive the English into the sea, made an attempt to incite the tribes along the Mississippi to join in another effort. Not succeeding in this attempt, he made peace, at Detroit, August 17, 1765. In 1769 he attended a carousal at Cahokia, Illinois, just across the Mississippi from St. Louis, at which he was killed by one of his own race. Parkman says of him: "Thus basely perished the champion of a ruined race. The murdered chief lay on the spot where he had fallen, until St. Ange, mindful of former friendship, sent to claim the body, and buried it with warlike honors, near his fort of St. Louis. Neither mound nor tablet marked the burial place of Pontiac. For a mausoleum, a city has risen above the forest hero; and the race whom he hated with such burning rancor, trample with unceasing footsteps over his forgotten grave."

LAST INDIAN OUTRAGE IN PENNSYLVANIA

In the spring of 1795, the same year in which General Wayne compelled the Western tribes to sign the treaty of Greenville, two Indian events happened in western Pennsylvania, causing considerable alarm in that region. The first was an attack, made on May seventh by a party of ten white men on a family of friendly Indians, on the Allegheny, near Franklin, Venango County, as these Indians were returning from their winter hunt. Two of the Indians were badly wounded, but all escaped with the loss of their goods. The officer at Fort Franklin furnished clothing to the Indian family for immediate relief. ("Pa. Archives," Sec. Series, Vol. VI, page 822.)

The second event was an act of retaliation. On May twenty-second, Ralph Rutledge (some accounts say his brother, also), one of a party of four men on their way from Le Boeuf (Waterford) to Presque Isle (Erie), was killed and scalped by Indians at a point now within the limits of the city of Erie, but then two miles from the fort at that place. ("Pa. Archives," Sec. Series, Vol. VI, page 823; also "Frontier Forts of Penna.," Vol. II, page 559.)

According to the Pennsylvania authority on Indian history, C. Hale Sipe, the murder of Rutledge was the last Indian atrocity in Pennsylvania during the period of Indian occupation. Later, on June 30, 1843, the wife and five children of James Wigton were murdered at their home, about a mile from the "Old Stone House," in Slippery Rock Township, Butler County, by an Indian named Samuel Mohawk, who had assisted in floating a raft of lumber down the Allegheny to Pittsburgh, and was on his way back to his home on the upper Allegheny, with his mind crazed and his moral sense subverted by the white man's whiskey, which he purchased at the taverns along the road. Upon coming to his sober senses, Mohawk sought God's forgiveness. He was visited a number of times in the Butler County jail by Rev. Gottlieb Bassler, pastor of the First English Lutheran Church of Butler, who, after a course of religious instructions, baptized him into the Christian faith. He was hanged at Butler on March 22, 1844. Though he made profession of religion and implored God's mercy, his body was denied burial in any of the cemeteries of Butler, and was buried in the woods. The dust of his victims reposes in the cemetery of the Muddy Creek Presbyterian Church, along the Butler and Slippery Rock pike, about nine miles north of Butler. (See Sipe's "History of Butler County, Pennsylvania," Vol. I, pages 450 to 455.)

WAYNE'S VICTORY AND FINAL PEACE

The uprising of the Western Indians and the raids upon the western Pennsylvania frontier continuing, called for an expedition to deal with the situation. Then President Washington chose General Wayne, "Mad Anthony," the hero of Stony Point, to lead such an expedition. When informed by Washington of his selection, Wayne is said to have replied: "I am the very man you want." He was a strict disciplinarian, and determined to avoid the faults which brought overwhelming and inglorious defeat upon his predecessors. He arrived in Pittsburgh in June, 1792, having been furnished with instructions from Washington in which it was stated "that another defeat would be irredeemably ruinous to the reputation of the Government." His

force was to consist of five thousand men, carefully drilled, and to be called "The Legion of the United States." At Pittsburgh, he erected Fort Fayette, where the Western National Bank now stands.

In December, 1792, his Legion was taken to the beautiful plain overlooking the Ohio, about twenty miles below Pittsburgh, where sham battles were fought and daily drills held. As has been previously stated, the place of this winter camp is known as Legionville and, while there, Wayne was visited by the old Indian chiefs, Guyasuta and Cornplanter, then friends of the United States.

Breaking camp late in April, 1793, Wayne led his forces to Fort Washington (Cincinnati), where they were reinforced by regulars and mounted militia from Kentucky. It was so late in the season before all his forces were collected and supplies procured, that the offensive movement was delayed until the next spring. Late in the year, he moved to a new camp, Fort Greenville, in Darke County, Ohio, six miles north of Fort Jefferson. During the winter, Wayne remained at Fort Greenville, swept the country between this place and the Miami villages, and took possession of the ground upon which St. Clair was defeated, erecting a fort there which he called Fort Recovery. Another detachment later marched to the scene of General Harmar's defeat, and erected Fort Wayne, named in honor of the commander of the Legion. His force now consisted of thirty-six hundred troops.

In the meantime, in the spring of 1793, commissioners representing the United States met the Western tribes in council, and proposed that, in consideration of the lands ceded by the treaty at Fort Harmar, the United States should pay the Indians "a large sum of money, or goods, besides a full yearly supply of such articles as they needed." The chiefs replied that money was of no value to them. Said they: "You talk to us about concessions. It appears strange that you should expect any from us, who have only been defending our just rights against your invasions. We want peace. Restore to us our country, and we shall be enemies no longer."

During the summer of 1794, Fort Recovery was garrisoned by a small detachment under Captain Gibson. On June twenty-ninth, Major William McMahon arrived at Fort Recovery with ninety riflemen and fifty dragoons. The next morning the fort was assailed by a large force of Indians and British and Detroit militia. They were repulsed with great slaughter. They renewed the attack the following morning, and were again repulsed. Then they retreated from the same field where St. Clair's army had gone down to crushing defeat. The

exact number of the Indian and British losses was never learned but when the enemy returned to the British post, Fort Miami, they said that no man ever fought better than they did at Fort Recovery, and that they lost twice as many as they did at St. Clair's defeat. One hundred and forty-two Americans were killed in the two attacks on Fort Recovery. However, the repulse of the Indians and British forces of more than fifteen hundred, showed the mettle of the Legion of the United States.

On July 26, 1794, Wayne was joined at Fort Greenville by General Charles Scott, with sixteen hundred mounted volunteers from Kentucky. He then moved forward, skirmishing with bands of lurking Indians as he advanced. He marched with open files, to insure rapidity in forming a line or in extending the flanks, and drilled his men to load while marching. He always halted in the middle of the afternoon, encamping in a hollow square and surrounding his camp with a rampart of logs. Arriving at the site of the present village of Defiance, Ohio, the confluence of the Anglaize and Maumee rivers, Wayne erected Fort Defiance, and made proposals of peace to the Indians. These were rejected contrary to the advice of Little Turtle, and in accordance with the advice of Blue Jacket. Said Little Turtle: "We have beaten the enemy twice under separate commanders. We cannot expect the same good fortune always to attend us. The Americans are now led by a chief who never sleeps. The night and day are alike to him, and during all the time that he has been marching upon our villages, notwithstanding the watchfulness of our young men, we have never been able to surprise him." Indeed, so stealthy had been Wayne's advance that the Indians nicknamed him "the Blacksnake."

On August eighteenth, Wayne continued his march and, on the morning of August twentieth, had proceeded about five miles, to a point several miles south of the present town of Maumee, in Lucas County, Ohio, when his advance guard was fired upon heavily by Indians in concealment, and fell back. He then formed his men in two lines where a tornado had blown down a number of trees in the woods—a circumstance which gave the engagement the name of the "Battle of the Fallen Timbers." The fallen trees made cavalry operations difficult, and afforded a shelter for the two thousand Indians and Canadians who were posted among them in two lines. Wayne's militia charged impetuously with the bayonet, leaping over the logs and delivering a well directed fire, while General Scott with his mounted volunteers, turned the right flank of the enemy by a circuitous movement, and Colonel Campbell, with his legionary cavalry,

turned the enemy's left flank. The Indians were driven at the point of the bayonet for more than two miles through the forest and decisively beaten. So rapidly did the Indians flee that Wayne's second line was not engaged. Nine Wyandot chiefs lay dead on the field. Blue Jacket, Little Turtle, Buckongahelas, Simon Girty, Alexander McKee and Matthew Elliott led the Indian forces in this battle. Wayne, in his official report, says that the woods were strewn with the bodies of the Indians and their white allies, and that the latter were armed with British muskets. The Americans lost thirty-three killed and one hundred wounded.

The Indians were driven under the guns of the British fort (Fort Miami) in the neighborhood, and so strong was the resentment of Wayne's men against the English, that it was with difficulty that they could be restrained from storming the fort. Indeed, many of the Kentucky troops advanced within gunshot of the fort and hurled a volley of curses against the garrison. However, the gates of the fort were closed against the Indians. Captain Campbell, the British commandant, sent a message to Wayne, complaining of this insult and demanding by what authority Wayne's troops trespassed upon the precincts of the British garrison. Mad Anthony replied in terms little less polite than those of the Kentucky troops, informing Captain Campbell that his only chance of safety was silence and civility. The day after the battle General Wayne rode up to the British Fort Miami and coolly inspected the works while the British held matches ready at their cannon. Then Wayne's troops destroyed the Indian cornfields, orchards, trading-houses, and stores. Soon after their crushing defeat, the various Western tribes sent delegations to General Wayne asking for peace. In addition to breaking forever the power of the Western tribes, one of the results of the battle of the Fallen Timbers was the surrender to the United States of Niagara, Detroit, Mackinac, Miami, and other posts hitherto held by the British, from which bases they had assisted and encouraged the Indians in their hostility against the Americans.

Finally, on August 3, 1795, the conquered tribes signed the Treaty at Greenville, Darke County, Ohio, by the terms of which they ceded to the United States twenty-five thousand square miles of territory north of the Ohio River, about two-thirds of the present State of Ohio. The treaty provided that the Western tribes be given \$20,000 in goods and an annual allowance of \$9,500. That part of Pennsylvania west of the Allegheny River and hitherto known as "the Indian country," henceforth was free from Indian raids. Settlers rapidly

took up their abode in the fertile region, felling the forest, cultivating the virgin soil, and laying the foundation of the material prosperity which there abounds today. Meanwhile the Indian continued his march toward the untrodden West before the great tide of white immigration that was pressing him away from the lands he and his forefathers considered their own, as the gift of the Great Spirit, who had stocked the forests with game and the streams with fish for His Red Children.

One of the signers of the Treaty of Greenville, the Shawnee chief Mio-qu-a-coo-na-caw, or Red Pole, is buried in the graveyard of Trinity Episcopal Church, in Pittsburgh. In the latter part of 1796, this chief and Blue Jacket, another Shawnee chief who signed the Treaty of Greenville, went from the Scioto to Philadelphia to interview the authorities of the United States Government. They returned to Pittsburgh on Christmas Day. Here Red Pole was taken sick, and died on January 28, 1797. On his tombstone, in addition to his name, position among his people and date of death, are the words: "Lamented by the United States."

General Wayne did not long survive his victorious campaign. In the autumn of 1796 he left Detroit, intending to return to his home in Chester County, Pennsylvania, as soon as possible. During his passage down Lake Erie, he became seriously ill, and arriving at Presque Isle (Erie), was unable to proceed further. No remedies were available either on the ship or at Fort Presque Isle, and he became rapidly worse. Dr. J. C. Wallace, who had served with him as surgeon in the campaign against the Western Indians, was summoned, being then at Fort Fayette (Pittsburgh). Dr. Wallace set out for Erie at once, but when he arrived at Franklin, he learned that the general was no more, having died on December 15, 1796, at Fort Presque Isle.

Two days after his death, his body was buried at the foot of the flag-staff of the fort. Here it rested until the spring of 1809, when his son, Colonel Isaac Wayne, came to Erie on horseback to have the remains taken home and re-buried in the family lot at Radnor, Chester County. On opening the grave, the body of "Mad Anthony" was found in a most remarkable state of preservation, but too bulky for the means of transportation available. The flesh was boiled from the bones by placing the body in a large lye kettle, and then re-interred in the original grave. Colonel Wayne carried the bones back over the mountains to the churchyard at Radnor. Colonel Wayne afterwards said: "I have always regretted it. Had I known the state the remains were in before separated, I think I should certainly have had them

again deposited there and let them rest and had a monument erected to his memory."

The Indian authority and author, C. Hale Sipe closes his valuable contribution to Pennsylvania history, "The Indian Wars of Pennsylvania" with a "conclusion" as follows:

"Now that the Pennsylvania Indians have yielded their pleasant land to the stronger hand of the white man and live only in the songs and chronicles of the race that pressed them away from their loved hunting grounds, may these chronicles be faithful to their rude virtues as men and not pass in silence the great wrongs and horrible atrocities which the anointed children of civilization and education—children of the God of Revelation—committed upon the untutored children of the forest. These wrongs and atrocities—the fraudulent 'Walking Purchase,' the Albany Purchase of 1754, the settling of squatters upon lands not purchased from the Indians, the degradation wrought by the whiskey and vices of the white traders, the massacre of the unarmed and defenseless Conestogas, the butchery of the Moravian Delawares at Gnadenhuetten, the offering of rewards for the scalps of Indian boys and girls—should be set over against the wrongs and atrocities committed by the race that was fighting and dying for the beautiful region of which it was the first owner.

"Nor should we lose sight of the fact that hundreds of atrocities perpetrated on the settlers of Pennsylvania, New York, Virginia and Kentucky by the Indians, during the Revolutionary War, were committed at the instigation of the British and British agents, who supplied the Indians with guns and ammunition and paid them substantial rewards for American scalps, even the scalps of women and children. Let us remember, too, that General Sullivan's Expedition against the Six Nations, which destroyed the houses and food supplies of the Iroquois and subjected them to the horrors of death by freezing and starvation, showed the Americans as ruthless as the race they attacked. There were many frontiersmen, who, actuated by an unrelenting hatred for the whole Indian race, made no distinction between good Indians and bad Indians, and were simply Indian hunters and killers, at all times, whether in peace or in war, and without regard to age or sex.

"Even at this late day, our flesh creeps and chills run down our pulses when we contemplate the horrors of the Indian wars of Pennsylvania. But let us not forget that the Indians, defrauded and cheated, were fighting to the death for their homes and hunting grounds; that they were proud spirits who were born free, and loved freedom more than life itself; and that they had ample reasons for hating, with such burning rancor, the race that drove them from the lands of their fathers—the lands they considered their own, as the gift of the Great Spirit to His Red Children. Also let us hope that, after the bloody warfare that pressed the Pennsylvania Indians towards the setting sun, the souls of the Indians and the souls of those who coveted their lands, entered into the common enjoyment of a peaceful eternity.

"Until time shall be no more, Indian place names will linger on our Pennsylvania mountains and along our Pennsylvania streams like the vibrations of deathless music—a mystic music which, let us hope, will soothe the rancor of those who write the chronicles of the relations between the Indians and their conquerors, and cause them to pay due tribute to their virtues as men and their unhappy fate as a people."

CHAPTER III

The Title to the Land

In the year 1886, Daniel Agnew, LL.D., one time Chief Justice of Pennsylvania, wrote an interesting book, "A History of the Region of Pennsylvania North of the Ohio and West of the Allegheny River."

From the preface of this book, we quote the following:

"Probably no part of Pennsylvania is more interesting in its history, settlement, titles, and protracted litigation than that portion lying north of the Ohio and west of the Allegheny River. A century having elapsed since its purchase of the Indians, and the passage of the laws regulating its appropriation and titles, few lawyers are living familiar with these subjects. The legislation peculiar to this region was unfortunate, and gave rise to contests which for many years retarded improvement, and rendered titles uncertain. It was my fortune to begin practice when lapse of time and the Statute of Limitations began to urge a final settlement of the disputes between the 'warrantees' and the 'settlers.' In the winter of 1829-30 accident, or good fortune, threw into my hands the second volume of Charles Smith's edition of the Laws of Pennsylvania, containing his exhaustive note (156 pages) on the Land Laws. The study of this was my preparation for a large practice in land titles.

"In December, 1818, John B. Wallace, Esq., had conveyed a large body of land, in Beaver County, to the Farmers and Mechanics' Bank of Philadelphia. In 1832 the bank, finding it necessary to act promptly, sent out its agent, William Grimshaw, Esq., a lawyer, better known as a compiler of minor histories and school-books. He compromised with many settlers, yet many were left against whom ejectments were brought, causing long litigation. I was largely employed, and became familiar with the disputes between the warrantees and settlers.

"The history of this region is so blended with the legislation relating to it, it is impossible to separate them. It is not only interesting, but necessary therefore to take a historical view of the condition in which this northwest territory was found, when the Indian title was relinquished, and the laws were passed relating to it. The number and variety of the original titles and their ramifications are so great they must be historically considered in order to understand them. Not more than three or four lawyers remain who were contemporary with the questions involved; and perhaps not another beside myself willing to undertake the labor of perpetuating the events which entered into them.

"Hoping that the account given in the following pages will be interesting and useful, I present them to the profession and the public."

The state of the western country, between the years 1780 and 1796, had a direct bearing upon the condition of the territory, and the land titles, within that section of Pennsylvania lying north of the Ohio and west of the Allegheny River. This portion is within the last purchases of the Indians at Fort Stanwix in 1784, Fort McIntosh in 1785, and Fort Harmar in 1789, to each of which reference has been made in preceding chapters. It is a matter not only of historical interest, but essential to a proper understanding of the land laws, land titles, and general history of this region, that the facts bearing upon its situation should be grouped in a short detail.

France, Spain and England were the three great powers which, in the seventeenth and eighteenth centuries, contended for the dominion of the northern half of the new continent. Spain pursued her designs in southern fields, France in northern, and Great Britain between the two. The Appalachian chain of mountains, running northeasterly and southwesterly, parallel to and a few hundred miles inland from the Atlantic coast, long formed a barrier to the English advance into the interior of North America. But France, entering the Gulf of the St. Lawrence, and ascending that river, found her way in the rear of that great mountain range, into the heart of the continent.

The world has rarely witnessed methods pursued similar to those of the French kings in the conquest of the wilds of America. No great army landed on these shores with banners flying, driving before them peaceful inhabitants. But religion, knowledge and chivalry made their way slowly from the St. Lawrence to the distant Mississippi, carrying

with them the influence of peace and the guise of friendship. Missionaries of the Cross, filled with zeal and possessing much of the learning of the age, were found in the wigwam of the Indian, and on the moss-carpeted floor of the wilderness, teaching the doctrines of Christ, and some of the ideas of civilization. Here toiled priest and chevalier—Champlain, LeCaron, Allouez, Mesnard, Brebeuf, Marquette, Joillet, La Salle, Hennepin, De Toni (Italian), Frontenac and others, many of whom imprinted their names upon the soil they trod.

France, following the river Ottawa, it chanced, discovered Lake Huron first, and thence spread over the country adjacent to Lakes Michigan and Superior, reaching the Illinois and Mississippi rivers. Later she found the straits leading into Lake Erie, and founded Detroit; in the meantime having discovered Ontario. Lake Erie was the last to be reached, owing to the adoption of the northern route by the Ottawa first, and to the Erie region being inhabited by the league of the warlike Iroquois, who presented a formidable barrier to progress in that direction.

Though some of the British colonies were planted as early as 1620, and even before, along the Atlantic coast, it was not until the middle of the next century the English broke over the Allegheny Mountain range and began the contest with France for the possession of the western territory, at the junction of the rivers where Pittsburgh now stands.

At this time the Western tribes of Indians were under the influence of the French, who had pushed their way to Presque Isle, on Lake Erie, and had built forts at Le Boeuf, above on French Creek, and at Venango, at its mouth.

The first step taken by the Colonial government was to ascertain the feelings of the Indians beyond the Allegheny River, and their number and strength; it being understood that they were declining in their friendship for the French. For this purpose, Conrad Weiser, a prominent citizen of Berks County, familiar with the Indian tongues, was sent out under instructions from the President and Council of Pennsylvania. He kept a minute journal, setting out from his home August 11, 1748, and reaching Logstown, on the north bank of the Ohio, on the twenty-seventh of August. His mission was faithfully performed, and favorable results accomplished.

In December, 1750, George Croghan, an Indian trader mentioned in preceding chapters, as the representative of Governor Hamilton, of Pennsylvania, held interviews with the Indians at Logstown, and made a treaty with some of the Six Nations, and the Delawares,

Shawnees, Wyandots and Twightwees. The next most memorable was the visit of Washington on behalf of Governor Dinwiddie, of Virginia, to the French commandant at Le Boeuf. The territory surrounding the confluence of the Monongahela and the Allegheny was then supposed by Virginia to belong to her. He set out in November, 1753, and reached Le Boeuf on December eleventh. His journal, kept in detail, was considered so important that it was published by Virginia. The result of his mission was the discovery of the intention of



(Photo Courtesy of "Clearfield Progress")

Tourists' Information Booth, Clearfield

the French to hold the head of the Ohio, and the country northward and westward, under the alleged discovery of La Salle, about eighty years before. In view of this fact the Governor and Council of Virginia resolved to send a force to the head of the Ohio, and plant a fort and station there. The Assembly voted the means, and a small army was raised, commanded by Colonel Fry, who died before the advance, and was succeeded in command by Washington. When Washington, with a part of his force, reached the Monongahela, he there encountered a small force of the French, sent from Fort Duquesne, at the junction of the rivers, under command of Jumonville. The French were defeated, and Jumonville killed, under circumstances the French

called assassination—a charge always denied by Washington. This was followed by the battle of the Great Meadows, with a larger force sent from the fort, the retreat of Washington, and building of Fort Necessity, and, finally, its surrender and evacuation by him.

The French having thus succeeded in holding possession of the territory at the head of the Ohio, Great Britain resolved upon stronger measures to dislodge them. This led to the memorable expedition under General Braddock, and his defeat on July 9, 1755, near the mouth of Turtle Creek, ten miles above Pittsburgh. He had come by way of Cumberland and Wills Creek. His defeat for a time confirmed the French possession, then extending from the Gulf of St. Lawrence to the southern shore of Lake Erie, and thence from Presque Isle, where Erie now stands, down the Ohio (as the Allegheny was then called) by a chain of forts at Presque Isle, Le Boeuf and Venango, to Fort Duquesne, at the junction of the rivers. It was by this route down the Allegheny, the French, under Mons. Contrecoeur, a French officer, in April, 1754, descended with three hundred canoes, and one thousand French and Indians, and eighteen cannon, drove off Ensign Ward, of the Virginia troops, and built Fort Duquesne, named after the French Governor of Canada. The defeat of General Braddock was a great disaster, and for a time retarded the efforts of the British.

The next attempt by the English to dislodge the French took place in 1758, by way of the Pennsylvania route, through the region now of Bedford and Westmoreland counties, and by way of Ligonier and Bushy Run. This expedition, under General John Forbes, was successful, and Fort Duquesne became Fort Pitt, soon to be known as Pittsburgh. But the French were not expelled from the western country, and though held in check by Fort Pitt, they and their Indian allies occupied the country north of the Ohio and west of the Allegheny: the Indians making frequent incursions southward and eastward of these streams, bringing terror to the few scattered inhabitants by their killing, scalping, and taking many prisoners, and carrying women and children into their western haunts.

The French power was broken by the fall of Quebec, and the capture of Niagara, yet it did not immediately surrender. The French army retired to Montreal, which became the center of their operations until September, 1760, when the French Governor of Canada, threatened by the near approach of two English armies, surrendered Montreal, Detroit, Mackinac, and all other posts within his dominion, to General Amherst the English commander.

Following this came the Treaty of Paris, of 1763, by which France ceded to Great Britain "her pretentions to Nova Scotia, or Acadia, and in full right Canada, with all its dependencies; and agreed that the boundary of division between the territories of Great Britain and France should be a line drawn along the middle of the Mississippi River to the river Iberville, thence by the middle of that river and the lakes Maurepas and Pontchartrain to the sea"; surrendering to Great Britain all the territory on the left, or east side of the Mississippi, excepting the town and island of New Orleans.

Peace, however, did not come to the western country. In 1762 Pontiac, the great Ottawa chief, fearful of English ascendancy, was forming his grand confederacy of all the Indian tribes, which took final shape in a general council at the river Ecorse, in April, 1763. This was followed by Pontiac's war, the siege of Fort Pitt, which brought about the expedition of Colonel Henry Bouquet, in the year 1764 and his brilliant but hard won victory at Bushy Run, all of which has been related in preceding chapters.

From Fort Pitt Colonel Bouquet made his expeditions against the Indians in what is now the State of Ohio, in the autumn of 1764. The relief of the siege of Detroit by the English, and their possession of the lake country, put an end to Pontiac's war. The Indian troubles, however, did not cease, and western Pennsylvania continued unsettled beyond the Allegheny River. This, at first, was largely owing to the influence of the French settlers along the lakes and in the western territory, whose bitterness toward the English constantly made the English Nation odious and hateful to the Indians. This animosity came to a head in 1774, in the war known as Lord Dunmore's. The settlers, then chiefly from Virginia, had pushed their improvements to the Ohio River and were advancing into Kentucky. Reports of Indian outrages, many untrue, were fanned into a flame among the excited whites along the Ohio, above and below Wheeling. These culminated in the massacre of two small bodies of Indians by Michael and Daniel Cresap, one below Wheeling at Captina, and the other at Baker's, opposite the mouth of Yellow Creek. They became the immediate causes of the war of 1774. It was in this state of hostile feeling that the murder of the family of Logan, the Mingo chief, took place, causing him, up to this time the firm friend of the whites, to enter into the struggle against them with an almost frantic zeal, and to gain his revenge in blood.

Now came another blast to fan the flame of Indian wrath against the whites—the war of the Revolution. England, in her effort to

subdue the colonies, regardless of the ties of blood and the dictates of humanity, sought the savages, and by every art in her power persuaded them to lift the tomahawk and sharpen the scalping knife against the whites in the West. Outrage and barbarity followed the footsteps of the Indians in their many incursions into the settlements. The entire territory north of the Ohio became unsafe. The declaration of peace between the United States and Great Britain by the Treaty of 1783 did not end the Indian warfare. These people of the forest saw the march of the white settlements still pressing onward toward their hunting grounds, and with the feelings natural to all men conceived that their rights were endangered, and a country believed to be their own about to be wrested from them by violence. In these feelings they were encouraged by certain white renegades, who had acquired influence among them.

The doctrine of conquest, however justified by so-called Christian kings, to expand their possessions and power, can scarcely be allowed as a justification for war, desolation, and seizure of land from those who inhabit it. Civilization pleads the barbarism of the natives; yet the pure principles of the doctrine of the Prince of Peace will find it difficult to defend such plea. It is the proud distinction of Pennsylvania that all the land she owns she bought. But this claim does not turn aside the trend of history. The Indian war was marked on the side of the whites by cruelty. The massacre of the Christian Moravian Indians at Gnadenhutten, on the Tuscarawas, was one of the most fiendish acts that ever disgraced civilized men, and whose particulars freeze the blood and make the heart stand still.

This state of affairs led to expeditions against the Indians, Crawford's in 1782, Harmar's in 1790, and St. Clair's in 1791, all of which suffered defeat. St. Clair's defeat, in 1791, was attributed to the lack of discipline of his troops, largely militia who had not undergone drill. To obviate this defect, General Anthony Wayne, who was commissioned to organize an army to deal with the Indians in the Ohio country, assembled his troops on the elevated plain on the Ohio since known as Legionville, where, during the winter and spring of 1792-1793, his men were drilled in the art of war. His brilliant campaign, culminating in the victory at the battle of the Fallen Timbers, which completely routed and broke the power of the Indians and the Treaty of Greenville which followed has been related in a preceding chapter. This treaty was ratified by the Senate of the United States on December 22, 1795—a date which has since played a conspicuous part in the

controversies upon the land titles of western Pennsylvania under an act of the Legislature of April 3, 1792.

We now review the acts which gave Pennsylvania title to the territory north and west of the Ohio and Allegheny rivers.

By treaty made at Fort Stanwix (now Rome, New York), on November 5, 1768, between the Penns and the Six Nations, the Indian title had been extinguished on the east side of a boundary beginning where the northern State line crosses the north branch of the Susquehanna River, and running a circuitous course by the west branch of that river to the Ohio (Allegheny), at Kittanning; thence down that river to where the western boundary of Pennsylvania crosses the main Ohio. Thence the line ran southward and eastward by the western and southern boundaries of the State, to the east side of the Allegheny Mountains. By a treaty made October 23, 1784, also at Fort Stanwix, between the commissioners of the State of Pennsylvania and the Six Nations, all the remaining Indian lands were purchased. The eastern boundary was that of the western boundary of the purchase of 1768.

The text of the deed covering the purchase of 1784 has been related in a previous chapter and it will be noted that, in this deed, the western boundary is said to cross the Ohio River, near Shingo's Old Town, at the mouth of Beaver Creek. The Indian town at the mouth of Big Beaver Creek was Sawkunk or Sawkung. Judge Agnew states that "I have not heard of any Shingo's Old Town at the mouth of Little Beaver." The Big Beaver seems to be the creek referred to, though the boundary, as afterwards run in 1785-86, fell a few yards below the mouth of Little Beaver, twelve miles below the Big Beaver. In 1753 Washington, in his journal, said Shingiss, king of the Delawares, lived about two miles below the forks of the Ohio (Pittsburgh). It is possible "Shingo's Old Town" merely indicated his chieftaincy, and not the name of the town. This uncertainty of the western boundary is referred to by General William Irvine in his report as agent of the State on the Donation Lands, August 17, 1785, and had much to do with preventing the donation surveys from being laid near to the western boundary.

The Wyandot and Delaware Indians then occupied a large territory west of the Allegheny River, and not being parties to the treaty made at Fort Stanwix, in 1784, a treaty with them was held by the same commissioners at Fort McIntosh (now Beaver), in January, 1785, and their title extinguished by a deed of January twenty-first. This deed is in terms and boundaries the same as that of October 23,

1784. Thus the Indian title to all lands in Pennsylvania was finally extinguished by purchase under the humane and enlightened policy which characterized the course of William Penn and his heirs.

At the time of the Treaty of 1785, the State was not the proprietor of the northwestern angle of the present territory of the State, called the Erie Triangle. A subsequent treaty was made in 1789, at Fort Harmar, for the purchase of the Indian title to the "Triangle."

In consequence of the Declaration of Independence of the Colonies in 1776, the title of the Penns became vested in the Commonwealth in sovereignty. This was declared by the divesting act of the Assembly, passed on November 27, 1779. The act saved, however, all titles granted by the Penns before July 4, 1776; and all private estates, and lands of the Penns, including surveyed manors or tenths, and certain quit-rents.

The Commonwealth having become the sovereign proprietor of all the lands within the State, and intending and anticipating the purchase of the Indian title, provided by an Act of March 12, 1783, for the appropriation of all that portion of the purchase of 1784 and 1785 north of the Ohio and west of the Allegheny River and the Cagnawaga (now Conewango) Creek, by dividing the same into two large and separate sections. These were:

1. For the redemption of the Certificates of Depreciation, given to the officers and soldiers of the Pennsylvania Line, in pursuance of an Act of December 18, 1780, providing that the certificates should be equal to gold or silver, in payment of unlocated lands, if the owners should think proper to purchase such.

2. In fulfilment of the promise of the State, in a resolution of March 7, 1780, to the officers and soldiers of the Pennsylvania Line to make them certain donations in lands, according to their rank in the service.

The Act of March 12, 1783, therefore, divided this territory by a due west line, running from Mogulbughtiton Creek, on the Allegheny River above Kittanning (probably Pine Creek), to the western boundary of the State. The course of this line runs between seven and eight miles south of the present city of New Castle, which lies in the fork of the Shenango and Neshannock creeks. The land south of this boundary was appropriated to the redemption of the Depreciation Certificates, and became known as the "Depreciation Lands." Out of this section were reserved to the State two tracts, of three thousand acres each; one at the mouth of the Allegheny, where Pittsburgh now stands: the other at the mouth of the Big Beaver Creek, on both sides,

including Fort McIntosh (now Beaver). The land north of the line above described was appropriated to donations to the soldiers of the Pennsylvania Line for their services in the Revolutionary War, and became known as the "Donation Lands."

These appropriations of territory in the last purchases, being first acted upon by the State, require their disposition to be first considered.



(Courtesy of Warren National Bank)

Warren From Washington Park

OF THE DEPRECIATION LANDS

In order to encourage enlistment, and to reward those who in the Revolutionary War entered into the military service in the Pennsylvania Line, and in the State Navy, the State promised to pay them in a sound currency, and also to secure to them donations of land. In pursuance of this patriotic purpose, and of the recommendation of Congress, of May 15, 1778, recited in the act, the State, by the Act of March 1, 1780, made provision for the State troops, and the officers and marines of the navy, extending these provisions to the widows and children of those killed in battle. An important supplement to that

act, passed October 1, 1781, reciting the Act of Congress of June 13, 1781, containing important additional provisions, may be consulted by those desiring further information. These provisions were continued by subsequent acts.

This encouragement to enter the service had become necessary owing to the diversion produced by the occupancy of Philadelphia by Lord Howe, in 1777-78, and the distress of the American Army lying at Valley Forge. Philadelphia became the refuge of royalists and neutrals, and the spirit of the people was much broken. Distress pervaded, and gloom fell upon all ranks for a time. An excellent view of this state of affairs can be realized from the diary of one living at the time, James Allen, a neutral, published in the "Pennsylvania Magazine of History and Biography," Vol. IX, for 1885.

By the Act of December 18, 1780, the State provided for the settlement of the depreciation from the Continental currency in the pay of the Pennsylvania Line and State Navy, and for issuing certificates for the same. They were made receivable in payment of confiscated estates and unlocated lands. The confiscation of the estates of traitors and seditious persons, many by name, others by description, owing to the number of persons flocking to Lord Howe for protection, and of those adhering to the crown of Great Britain (then commonly called royalists), had been provided for in the Act of March 6, 1778. The fifth section recited that it was "highly reasonable that the estates of subjects or inhabitants of this State who have engaged in the present most unnatural, unjust, barbarous, and execrable war, and who shall be duly attainted as guilty of treason, should be discovered and applied to the use of the State."

The subject of confiscation is, however, apart, and it is as payment for "unlocated lands" that the certificates are being noticed. These certificates were included in the Act of April 3, 1781, directing the mode of adjusting and settling the payment of debts and contracts entered into and made between January 1, 1777, and March 1, 1781. The fifth section gave the scales of depreciation for the years 1777 to 1781 inclusive, as compared with silver and gold. In July, 1777, the scale was three to one; in 1778 it rose to six to one; in 1779, to forty-one and a half to one; in 1780 to seventy-five to one; and in 1781 was seventy-five. Afterwards the scale of depreciation was published from time to time, under the Act of December 23, 1780.

For the purpose of carrying out the legislation of the State as to Pennsylvania troops, the Supreme Executive Council, on April 23, 1781, resolved "that James Stevenson, John Nicholson, Wm. Goforth,

Robert Levers, Samuel Boyd, Henry Haller, John Thom, John Beacon, Henry Slagle, and Samuel Laird, or any two of them, of whom the said James Stevenson *and* John Nicholson always to be one, be appointed commissioners for the payment of one-third of the depreciation certificates as directed by the said Act."

The said "auditors" were also empowered to correct certain mistakes, take receipts on certificates surrendered for money paid on account, and to pay strict regard to the law confining the payment to officers and soldiers in the actual service.

After these acts, provisions, and resolutions of council came the Act of March 12, 1783, heretofore referred to, describing and appropriating the land for the redemption of the certificates of depreciation given to the officers and soldiers of the Pennsylvania Line. The territory so appropriated is described as follows: "Beginning where the western boundary of this State crosses the Ohio River; thence up the said river to Fort Pitt; thence up the Allegheny River to the mouth of Mogulbughtiton Creek; thence by a west line to the western boundary of this State; thence south by the said boundary to the place of beginning."

This line west from the mouth of Mogulbughtiton (Pine) Creek, was run by Alexander McClean, Esq. The land to the north of this line was by the same Act of March 12, 1783, appropriated to donations to the officers and soldiers of the Pennsylvania Line.

Out of the land appropriated for the redemption of the certificates of depreciation two reservations, of three thousand acres each, were made by the act, which will be treated later.

The Act of 1783 required the "Depreciation Land" to be laid out by the Surveyor-General, under the direction of the Supreme Executive Council, into lots of not less than two hundred acres, and not more than three hundred and fifty acres, numbering them numerically on the draft or plot of the country. As soon as the same, or one hundred lots thereof, should be surveyed, the Surveyor-General, Secretary of the Land Office, and Receiver-General, were required to proceed to sell, in numerical order, at such times and places, and under such regulations as should be appointed by the Supreme Executive Council; the full consideration bid at such sales to be paid in silver or gold, or in depreciation certificates.

Intelligence of Indian hostilities caused the Council to delay the order to the Surveyor-General to proceed to survey these lands until June 10, 1783, when the instructions to him were issued, and he was directed to proceed with the work immediately. He was authorized

to begin with the surveys of the two tracts of three thousand acres reserved for the use of the State, and then to survey the remainder, and lay out and number the lots contiguous to each other; and thus form an accurate draught or map of the country. On the map were to be noted the courses and depths of the waters, places of mines, sites for towns, the quantity of each lot, and a precise description. The courses and distances were to be determined with precision and distinctly marked, retaining the natural boundaries, and dividing the waters as well as the nature of the ground would admit. Care and nicety in the work were required, and those employed were forbidden to give information of the quantity and advantages of the lots, except in the return made to the Council. In the performance of the work the advice and assistance of William Irvine were to be furnished. He was then the military commandant at Fort Pitt.

It would appear that, even at that early period of the Nation, men were found disposed to advance their private interest by the sacrifice of the public good. Information to this effect, probably from General Irvine, led Secretary John Armstrong, on July 2, 1783, to address a letter to the Surveyor-General, John Lukens, advising him of combinations formed to engross large tracts of the best part of the land assigned by law for the redemption of depreciation certificates, and plans laid to conceal the relative value of the lots, and enjoining the utmost care to prevent all abuse of trust. A second point of apprehension was the unlawful breaking in upon the tract appropriated for donations. The sixth section of the Act of 1783 had made void all grants of lands within the Depreciation and Donation tracts by any Indian Nation, the late proprietaries, and other persons. On July 3, 1783, General Irvine was, by letter, thanked for his communication June 3, and his attention asked in giving care to the two tracts appropriated to the State.

For the purpose of surveying the lands appropriated to the payment of the certificates of depreciation, this territory was divided into five principal districts, running from the Ohio northward, and numbering from the west to the east. District No. 1, allotted to Alexander McClean, deputy surveyor, lay nearest to the western boundary of the State. District No. 2 was allotted to Daniel Leet and ——— Ritchie, deputy surveyors, though Leet appears to have made the surveys. No. 3 was divided among Nathaniel Braden, William Alexander, Samuel Nicholson, Ephraim Douglass, and Samuel Jones; it is commonly called Braden's District. No. 4 was allotted to James Cunningham; and No. 5 to Joshua Elder and John Morris, deputy surveyors.

The instructions of the Surveyor-General are not to be found in the Land Office.

On August 29, 1785, the Surveyor-General reported to the Council that he had received upwards of one hundred and forty returns of survey of the land appropriated to the redemption of the depreciation certificates, and daily expected more. Thereupon the Council ordered him to furnish a map descriptive of the lots reported. From time to time surveys were reported as they came in from the several districts; these returns appear to have come in irregularly.

September 12, 1785, the Supreme Executive Council ordered one hundred lots in Daniel Leet's district to be sold; and on November 11, 1785, ordered the sale of forty-three lots remaining in the same district. On November 18, 1785, the Council directed the Depreciation Lands to be sold by the acre, that the city auctioneer of Philadelphia be employed to sell them, and that no warrant directing a return of survey should issue. The lands having been surveyed in districts and maps made, the last direction was to obviate returns for each lot, for patenting, as was the practice of the Land Office in ordinary cases.

To the orders of September twelfth and November eleventh John Lukens, Surveyor-General; David Kennedy, Secretary of the Land Office, and Francis Johnston, Receiver-General, returned on November 26, 1785, that they proceeded to the sale of the lots in Leet's district; the quantity sold amounted to 38,202 acres, and amount of cash received was £13,985 14s., an average of a little over 8 shillings and 5 pence per acre. These sales were made at the "Old Coffee-house," in Philadelphia.

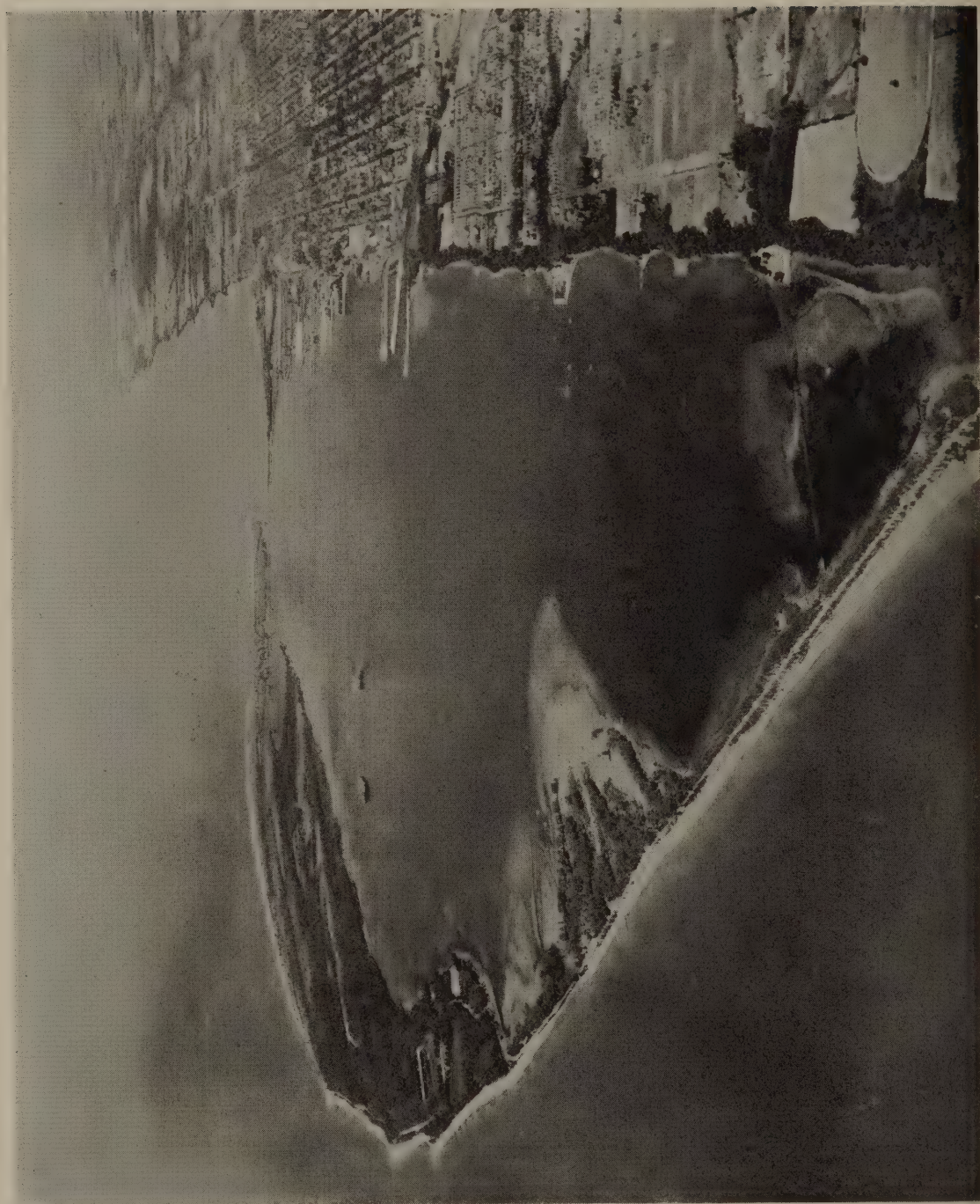
December 6, 1785, a report was made by the Surveyor-General, Secretary of the Land Office, and Receiver-General, of sales of the lands in Nathaniel Braden's district—31,883 acres—for £4402 17s. 3d., averaging 2 shillings 6½ pence per acre, and when added to the amount of sales in Leet's district, averaging only five shillings per acre. They therefore recommended a suspension of sales for a time.

On December 12, 1785, Francis Johnston, Receiver-General, informed the Council that the time of payment for the lands sold in Leet's district had expired, and he had reason to believe sundry purchasers did not mean to comply with the terms of sale, and he submitted to Council what steps should be taken.

March 12, 1787, the Receiver-General reported sales on March seventh, at the "Old Coffee-house," of the remaining lots in Leet's district, but to his surprise the twenty-seven lots sold averaged only £5 8s. 4d. per one hundred acres. He postponed the sales until the

tenth, when but three lots were sold at the rate of 3 pence per acre. He recommended that the sales in the city, at auction, should cease, as lands so distant could not be sold there. This sale was made under an order of Council, of December 28, 1786, directing sales at the "Old Coffee-house" on the first Monday of March, 1787. Judge Agnew refers to this as the last report of sales he had found. It is evident that these western lands were not in demand owing to several reasons. Indian hostilities were then active. Many of the drawn donation lots were sold by the soldiers, especially the privates, at very low prices. Judge Agnew states that in his practice he had seen many of these assignments endorsed on the patents. This fact is also referred to in the report of the Register-General of March 12, 1787. The whole western territory, north of the Ohio, was then an uninhabited wilderness. This state of affairs continued much later, as will be seen in a letter of General Richard Butler, of August 10, 1790. The disinclination of the State authorities to sacrifice the public lands is seen also in the order of the Council of June 5, 1790, ordering certain lots purchased by John Nicholson to revert to the State. Nicholson had on May twenty-eighth previous asked to know whether he should retain them.

These sales are related as Judge Agnew has stated that "the tradition came to me in my early practice that the sales were discontinued in consequence of the low prices brought at the 'Coffee-house,' and owing to this fact the Depreciation Lands were taken up by warrant and survey under the Act of April 3, 1792." On the very day of the passage of this law Daniel Broadhead, then Surveyor-General, had two warrants issued in the names of William Barker and Joseph Williams, for lands opposite to the great falls of the Big Beaver, on which the town of Old Brighton (now part of Beaver Falls) was located. On April 14, 1792, many warrants were issued, which were surveyed on Depreciation Lands. On what grounds the officers of the Land Office considered the office open for the sale and settlement of the Depreciation Lands is not known, unless the abandonment of the sales led to the belief that these lands then fell within the general provisions for the sale of the lands within the last purchase. But it was not until the passage of the Act of March 22, 1813, these titles had the benefit of express legislation. Yet many of the titles so obtained were before the Supreme Court, and this question not raised. In the meantime the depreciation certificates had been declared to be irredeemable



Waterfront, Erie

if not presented to the Receiver-General on or before the second Tuesday in January, 1807.

No important judicial decisions have been made as to the depreciation titles. The surveys were generally well made, owing to their proximity to Fort Pitt, and the method of sale led to no contests. These surveys were afterwards partly adopted in locations made under the Act of April 3, 1792. In a few instances this partial adoption led to litigation. Among the most noted instances were the lawsuits upon the two surveys made for General Broadhead, surveyed at 440 acres and allowance of six per centum; and Joseph Williams, surveyed at 410 acres and allowance. This litigation began with the century, and was continued with various success until the last case came before Justice Greer, in the Circuit Court of the United States at Pittsburgh, about 1860.

The effect of a partial adoption of the lines of the depreciation surveys under the Act of April 3, 1792, was decided in a case identified as *McRhea vs. Plummer*. The effect of the Depreciation District lines was considered in the case of *Evans vs. Beatty*. In that case Justice Huston remarked, that when the sale of the Depreciation Lands by auction was abandoned, and the country thrown open to settlement or sale in the ordinary mode, the country was again divided into districts, and surveyors appointed. But he does not state on what grounds *these* land were considered open to settlement and sale. The districts referred to by him were necessary at all events, owing to the vacant lands interspersed among the Depreciation Lands. The Legislature appears to have considered the Act of 1813 necessary to cure defects and dispel doubts.

THE DONATION LANDS

As Judge Agnew said, the Depreciation and Donation lands were the twin progeny of patriotism and necessity. As has been stated already, the northern section of the lands divided by the Act of March 13, 1783, was appropriated to donations to be made to soldiers of the Pennsylvania Line.

The fifth section of the act provides, that for the purpose of effectually complying with the letter and intention of the said resolve (mentioned in the preamble), there be, and it is hereby declared to be, located and laid off, a certain tract of country beginning at the "mouth of Mogulbughtiton Creek; thence up the Allegheny River to the mouth of the Cagnawaga Creek; thence due north to the northern boundary of this State; thence west by the said boundary to the north-

west corner of the State; thence south by the western boundary of the State to the northwest corner of lands appropriated by this act for discharging the certificates herein mentioned; and thence by the same lands east to the place of beginning; which said tract of country shall be reserved and set apart for the only and sole use of fulfilling and carrying into execution the said resolve."

The sixth section forbade any improvement location, warrant, grant, right, title, or claim under the Indians, the late proprietaries, or other person or persons whatsoever, upon the limits of the two described tracts of country, and made void all such claims. It also put it out of the power of non-commissioned officers and privates to sell their shares of the land until actually surveyed and laid off.

The Act of March 1, 1780, had previously exempted the soldiers' lands from taxation during the lifetime of the soldier, unless when alienated or transferred. The Act of March 16, 1785, made the same provision. This exemption from taxation during life led to several important judicial decisions. The Act of March 24, 1785, followed, "directing the mode of distributing the Donation Lands promised to the troops of this Commonwealth." It referred to the resolution of March 7, 1780, and the Act of March 12, 1783, and directed the Surveyor-General to appoint deputies, to be approved by the Supreme Executive Council, to survey and lay off the land into lots; provided what officers and soldiers should be entitled to lands (including Baron Steuben, Inspector-General, and Lieutenant-Colonel Tilghman), according to the rank and pay they held last before they left the service; excepting that no promotion or rank by brevet or commission should entitle, unless where pay had been allowed by the United States, and these donations should not be affected by donations of land promised by Congress. The Comptroller-General was directed to make complete lists of persons, stating their rank and quantity of land, to be laid before the Council, that the Surveyor-General might be able to instruct his deputies as to the number of contents of the lots. The lots were to be of four descriptions, *viz*: five hundred acres, three hundred acres, two hundred fifty acres, and two hundred acres each; a quantity laid off in five hundred-acre lots, equal to what should be necessary for major-generals, brigadier-generals, colonels, captains, and two-thirds of lieutenant-colonels; in three hundred-acre lots for regimental surgeons and mates, chaplains, majors, and ensigns; in two hundred fifty-acre lots for one-third of lieutenant-colonels, sergeants, sergeant-majors, and quartermasters; and in two hundred-acre

lots for lieutenants, corporals, drummers, fifiers, drum-majors, and privates.

The deputy surveyors were required to make oath not to select the best lands, or to favor any of these classes to the prejudice of the others. In running the boundaries the surveyors were to define well by marking trees on the lines at short distances, and particularly the angles and corners; and on the northwest corner of each lot the number of the lot should be marked. If the corner should be a post, the number should be marked on a tree in the lot nearest to the corner.

The neglect of the surveyors to perform these directions—a neglect owing to the payment of a fee for each lot surveyed, and a fear of the Indians who were hostile—led to many difficult lawsuits. The territory was divided into districts, for each one of which a deputy surveyor was appointed. In running from the base, or district line, north or south, the surveyor ran a distance required for each lot, and marked its corner. He would there set his compass, taking the course east or west, as the case might be, and direct the axeman to mark a tree or two on the course, and instead of running the line through and marking it as the law contemplated, he would go on in his first direction, north or south. The effect was that the east and west lines were not marked through. The usual mode, after starting north or south from the base or district line, was to run the breadth of four tracts, marking the corners of each lot, and a tree or two as before stated; then turning east or west, as the survey required, to run across to the opposite corner; then going on in the first direction, north or south, to repeat the same thing, and at the breadth of four tracts to return east or west to the first line, repeating this method until the other line of the district was reached. The return to the first district or base line followed the same method. As a consequence of this mode, owing to the uneven and woody surface of the country, and to mistakes of the chain-carriers, the chaining was often inaccurate, and three out of the four cross lines (east or west) were not carried and marked through: chain-carriers sometimes dropped "pins" by which the count was kept, or failed to "knot" the "outs," as they were called, when the whole number of pins were "stuck." The effect of these errors was that the eastern and western corners of tracts were not opposite to each other, and the lots assumed irregular figures, instead of being rectangular parallelograms. "Having tried many boundary disputes" says Judge Agnew, "I have known tracts to fall short or to overrun as many as fifty acres." The corners being marked and the

east and west lines not, the law required, as it was held by the courts, a straight line to be run from corner to corner.

Perhaps the most important feature in the direction to survey is that which required the northwest corner to be marked with the number of the lot. As a consequence this "numbered corner" became the "earmark" of the tract, and controlled all other matters of description; even the very place the number occupied on the "General Draft," and the adjoiners stated in the patent. In other words, it wrenched the lot from its place on the draft, and fixed it on the place where the number was found marked on the ground. The reasons given for this control of the "numbered corner" are forcibly stated by Chief Justice Gibson in the case of *Smith vs. Moore*, and are worthy of a careful perusal. The principle of the decision is, that the numbered corner is the legal, original, and the true index of the ground it occupies, and being marked on the ground by the order of the law itself, it is the conclusive evidence of the identity of the survey, and of the lot attached to it. It must therefore supersede all other evidence. The effect of this primary evidence of identity was, in the case of *Dunn vs. Ralyea*, to dislocate the lot from the place it fitted on the "General Draft," and to locate it several miles distant, on the ground where the number as marked placed it.

The corner was numbered by cutting on the tree a broad, flat surface, upon which the numbers were sunk with a tool, such as was used by millers in marking the numbers on barrels. These numbers have often been seen fifty and sixty years afterwards, by removing the growths of the tree over the numbers. The marks made in 1785 and 1786 were grown over annually with new wood, made by the downward current of the sap in the summer. The outward mark, when not discovered by an ordinary observer after so many years, would be detected by skilful surveyors by a discoloration of the bark. Sometimes it required the observer to stand off a number of yards to perceive this discoloration. Often in these very old marks it required the tree to be "blocked," to prove the existence of the mark. The removal of the supervening growths displayed the original cut. This testimony of nature often disposed of questions of survey when no other evidence remained.

When a sufficient number of lots had been surveyed, the law required a connected draft of them to be made, noting the number on each lot, and the draft to be deposited afterwards in the office of the Master of the Rolls, as a public record, to serve when the number is

drawn, and the name of the soldier noted on the lot, in lieu of recording the patents.

In consequence of lapse of time, dying of timber, burning of the woods, and obliteration of the original marks, the location of some of the surveys became uncertain. To remove this doubt the Legislature passed the Act of March 24, 1818, making the "General Drafts"—that is, the maps of the several districts—the evidence of the location of the lots, and making office copies evidence in courts of competent jurisdiction.

The thirteenth section of the Act of March 24, 1785, provided for the distribution of the lots by lottery, the tickets to be drawn from a wheel, well turned round, and kept in safe custody under the direction of a committee of three members of the Supreme Executive Council; the committee judging of the right of each applicant to draw from the wheel.

A major-general was entitled to draw four five hundred-acre lots; a brigadier-general, three five hundred-acre lots; a colonel, two five hundred-acre lots; a lieutenant-colonel, one five hundred-acre lot and one two hundred fifty-acre lot; a surgeon, chaplain, or major, two three hundred-acre lots; a captain, one five hundred-acre lot; a lieutenant, two two hundred-acre lots; an ensign or regimental surgeon, one three hundred-acre lot; a sergeant, sergeant-major, or quartermaster-sergeant, one two hundred fifty-acre lot; and a drum-major, fife-major, drummer, fifer, corporal, or private, one two hundred-acre lot.

The fourth section provided for the issuing of patents for the numbers drawn and the form of the patent. The fees of the surveyors were three pounds for every five hundred-acre lot; two pounds for three hundred acres, and one pound, ten shillings for two hundred fifty and two hundred-acre lots; which should include all expenses of chain-bearers, markers, and other charges; to be paid by each applicant, in proportion to his lands, before drawing. The time for making application was extended to the expiration of one year after the Surveyor-General should have returned to Council the draft, of which public notice was to be given.

After the time for drawing had expired, the remaining unsold lots and the residue of the lands appropriated, not applied to be laid off, were to be advertised and sold within a reasonable time for the benefit of the State; and all certificates of depreciation received in payment, then receivable in the Land Office for lands sold by the Commonwealth agreeably to law.

As the western and northern boundaries of the State were not then run and marked, the Council was required to direct the lands remote from these boundaries to be first surveyed.

On May 3, 1785, the Comptroller-General reported to the Council a list of persons entitled to Donation Lands, with the quantity of each, agreeable to the grants ordered to be made to the officers and soldiers of the Pennsylvania Line; and on the same day the Council instructed the Surveyor-General to direct his deputies to survey the lands, first surveying those most remote from the northern and western boundaries of the State.

On May 5, 1785, the Surveyor-General nominated and reported for approval the deputy surveyors of the Donation Lands under the Act of March 24, 1785. They were: Major William Alexander, Benjamin Lodge, Captain James Christie, Ephraim Douglass, Griffith Evans, James Dickinson, John Henderson, William Power, Jr., Peter Light, Andrew Henderson, James Hoge, David Watts of Sherman's Valley, Alexander McDowell. The report was approved.

The Donation Lands were laid out into ten districts, running east and west. Number one began at the line of the Depreciation Lands; the others followed numerically to the northern boundary of the State. The deputy surveyors were as follows:

William Alexander for District No. 1
John Henderson for District No. 2
Griffith Evans for District No. 3
Andrew Henderson for District No. 4
Benjamin Lodge for District No. 5
James Christie for District No. 6
William Power for District No. 7
Alexander McDowell for District No. 8
James Dickinson for District No. 9
David Watts for District No. 10

Griffith Evans was afterwards appointed surveyor of District No. Nine, in place of James Dickinson, who suspended work on account of his fear of the Indians. The commission to Griffith Evans, as surveyor of District No. Nine, contained the following clause: "Also of so much of the lands remaining yet unsurveyed on the waters of Beaver River as shall be sufficient to satisfy the quota of donation lots assigned to the aforesaid district." Date, May 8, 1786; under this clause he surveyed in Districts Nos. One and Two.



Bradford in 1876

On the same day, May 5, 1785, commissioners were appointed to run and mark the western boundary of the State from the Ohio River to the northwest corner of the State. Owing to the uncertainty of the true line of the western boundary, much good land west of the Beaver River was left unsurveyed. After its location by the State Commissioners, Evans surveyed many tracts on this land in Districts One and Two, under the clause in his commission just recited. An agent duly qualified was required, to be appointed by the Council, to explore the country, noting the quality of the soil, the hills, mountains, and waters, creeks, marshes, upland, bottom-land, and such other matters as deserved notice, with the situation and distance, and particularly the land unfit for cultivation. The agent was required to make oath to perform his duties impartially, and was to receive one pound ten shillings for every day employed, not exceeding four months. His report was to be published. The twenty-fourth section of Act of March 24, 1785, had required the surveys to be made and returned on or before February 1, 1786; and required the agent to report failures of duty on the part of any of the deputy surveyors. Whether any suspension of the surveyors took place is not clear. But the Council must have been desirous of haste, as on the twentieth of the preceding July they wrote to David Rittenhouse and Andrew Porter, the Commissioners, urging the completion of the survey of the western boundary. This was necessary to carry forward the Donation surveys. It appears, however, by a letter of James Dickinson, surveyor of District No. Nine, dated at Pittsburgh, January 24, 1786, that fear of the Indians prevailed, and a conference with the Indian chiefs Long Face and Long Hair led him, under the advice of John Wilkins and Jacob Springer, traders, to leave the survey for a time. Indeed, it was not until the ninth of January, 1789, that the title of the Indians to the lands bordering on Lake Erie and the Triangle was fully extinguished by the agreement of that date, made by General Richard Butler and John Gibson, Commissioners of Pennsylvania, at Fort Harmar, with the chiefs, warriors, and others representing the various tribes of the Six Nations. The surveys, however, were generally completed in 1786, though a few were made later.

The seventh section of the Act of March 12, 1783, had directed that all officers and privates entitled to land should make their applications within two years after peace should be declared, and should any die, their heirs, executors, etc., should make application within one year thereafter. In the event of neglect within the time limited it

was then lawful for any person to apply to the Land Office to take up unlocated lands on such terms as the Legislature should thereafter direct. This period was extended by various laws from time to time.

Many of those entitled to lands having failed to appear or to apply, the Legislature, on April 6, 1792, passed an act authorizing the land officers, on July 2, 1792, to draw lots for every person entitled to Donation Land, who had not received the same, according to the list furnished by the Comptroller-General, in the same manner as if the persons entitled were present. Patents were to be issued within two years from the date of the act. Any land not applied for within two years was ordered to be disposed of, agreeably to the regulations of the act for the sale of the vacant lands within the Commonwealth. The general act for the sale of the vacant lands had been passed only three days before, on April 3, 1792.

The limitation of two years was virtually repealed in the second section of the Act of April 5, 1793, and the land officers were required to draw lots for every person entitled who had not received his donation, and should apply therefore, agreeably to the list submitted by the Comptroller-General to the Supreme Executive Council, and to issue patents in conformity with the second section of the Act of April 6, 1792. The time for drawing under the second section was indefinite, none being fixed by the law.

On April 17, 1795, another general act was passed, directing the Comptroller-General to make lists of the names of those entitled to Donation Lands, whose names had not been included in his last report, together with their rank and quantity of land. Tickets were to be prepared for all persons entitled to Donation Lands, but not any more, and placed in the wheel, kept safely in custody, from which the land officers were to draw for those entitled, who had not before drawn lots. Report of the drawings was to be made to the Governor, who should cause patents to issue at the expense of the State. The legal representatives of deceased persons were entitled to all the advantages of the act. All persons entitled were required to make application within one year; those beyond sea, or out of the United States, within two years; and officers and soldiers in the service of the United States within three years after the passage of the act.

By the sixth section, after the expiration of these periods, so much of the Donation Lands for which no application had been made might be disposed of in such manner as the Legislature should further direct. The time was further extended by Act of March 20, 1797, and again

extended by Act of April 11, 1799, until September 1, 1799. Before any claim should be allowed it should be presented to the Comptroller-General, Register-General, and State Treasurer, who should inquire into its lawfulness, and, if allowed or rejected, the result certified to the Secretary of the Land Office. Notice was to be given of the time limited, and lots drawn after September first in favor of all claimants receiving a certificate of allowance. On May 1, 1800, the powers given were to cease, and no lots drawn afterwards. The residue of the Donation Lands was then to revert to the State, and be disposed of in such manner as should be directed by law in relation to other lands the property of the State.

The time, however, was further extended by Act of February 23, 1801, the second section of which required the Comptroller-General to furnish the Secretary of the Land Office with a list of names of all persons who had drawn lots, but not obtained patents for the same, with the numbers of the lots drawn, and the district in which they lay. It made it the duty of the secretary, on application, to cause patents to be issued accordingly; the patents to be on parchment, and at the expense of the State; and any frauds or disputes to be decided by the Board of Property, as in other cases.

The first and third section of this act related to Donation Lots which had been surveyed beyond the Pennsylvania northern boundary and in the State of New York, as shown by the running and marking of the boundary line in the meantime. Up to this time the subject of the Donation Lands had become complicated by the numerous acts passed, and the limitations adopted, and extended from time to time, and many persons had not received their gratuities.

The Legislature, therefore, resolved to reopen the subject, and passed the Act of April 2, 1802, entitled "An Act to complete the benevolent intention of the Legislature of this Commonwealth, by distributing the Donation Lands to all who are entitled thereto." The preamble recited that some of the soldiers of the Pennsylvania Line had not received Donation Lands; that some of the lots supposed to lie in New York were still in Pennsylvania, and that other lots had not been numbered and returned, or were otherwise appropriated. The act therefore required the land officers to ascertain these, cause them to be ticketed, and to be drawn in a prescribed manner, upon the application of those entitled, in the order of their applications: "Provided always that no lot to be drawn or patent to be issued in pursuance of this act shall interfere with or defeat any prior title,

which may have been acquired under the authority of any former law of this Commonwealth."

This proviso had an important bearing upon titles to undrawn Donation Lots acquired under the Act of April 3, 1792, and April 22, 1794; and especially upon titles acquired by settlement upon tracts lying within the eastern part of the Second District, known as the "Struck District."

The second section of the Act of 1802 required the Surveyor-General to ascertain the lots referred to with accuracy by actual survey, have returns made, and divide large into smaller lots, so as to supply the number required to carry the design of the act into complete effect. Under this act the Board of Property was to exercise the same powers relating to Donation Lands as in the cases of other lands, and to decide cases of difficulty and dispute. Provision was made for the widows and heirs of deceased soldiers. Applications for lands and patents were limited to one year after the passage of the act. The Act of 1802 was continued until the first of April, 1805, by Acts of April 1, 1803, and March 29, 1804.

By the Act of March 25, 1805, persons holding donation lands within the "Struck District" and the Erie Triangle were authorized, upon the releasing of their patents, to have other unappropriated lots of equal quantity to be patented to them free of expense. The second section provided that this law and the Act of April 2, 1802 (excepting the limitation clause in that act), should continue in force until April 1, 1806. The first section of the Act of 1805 was continued in force until the first of April, 1810. This act ended the general legislation conferring donations, and since April 1, 1810, the Land Office has been closed against further applications.

Finally came the Act of March 26, 1813, which opened all Donation Lands which should remain undrawn on October 1, 1813, to improvement and actual settlement and confirmed titles by actual settlement theretofore made. The terms of this act differed from those of April 3, 1792. The settler must have resided thereon with his family for three successive years immediately preceding the passage of the act, and cleared, and fenced and cultivated at least ten acres thereof. Any person who should, after October first then next, make an improvement and actual settlement on any undrawn tract, by erecting thereon a dwelling house fit for the habitation of man, and reside thereon with a family for three years from the date of his settlement, and clear, fence, and cultivate at least ten acres thereof,

and make proof of the completion of his settlement and residence, by two witnesses, before a judge or justice of the same county, and pay to the State \$1.50 per acre, with interest from three years after his settlement, should be entitled to a patent. But the patent should not issue until the applicant produced a certificate of the deputy surveyor of the proper county, certifying to the number of the tract, the number of acres, and a survey by him according to the original boundaries. The first settlement made and continued was to give inception of title.

Notwithstanding the closing of the office against applications of the soldiers after April 1, 1810, this law seems inferentially to have recognized a continuance of them until October 1, 1813. Probably this meant to embrace the applications of widows and heirs.

In order to facilitate actual settlements under the Act of 1813, the third section provided for a list of all undrawn lots in the several districts, and a publication thereof at the seat of government, and at Pittsburgh, Mercer, Meadville and Beaver.

In August, 1785, General Wm. Irvine, the agent appointed by the State to explore and examine the Donation Lands, reported to the Supreme Executive Council those parts of the lands he considered unfit as gratuities to the soldiers of the Pennsylvania Line. Among these, he found the land north of the line of the Depreciation Lands, and eastward from the path from Fort Pitt to Venango, at the mouth of French Creek, beginning about forty miles above Fort Pitt, pretty good for about five or six miles; thence to the Allegheny River, about twenty-five miles due east, no land was fit for cultivation.

In consequence of this report, the Council left out of the wheels the lots within the easternmost part of the Second District. This part was afterwards known as the "Struck District," previously mentioned, and was generally understood at the time to be subject to actual settlement under the Act of April 3, 1792. It was therefore entered upon and settled by persons who had made large and valuable improvements. Indeed, it was afterwards held by the Supreme Court that these titles were valid, in the case of *Varnum vs. Kennedy*. The decision was admitted by Judge Duncan, who delivered the opinion, to be a doubtful matter. Still, it was wise and just, and prevented, probably, contests between the settlers and the soldiers. The Act of March 25, 1805, however, ended all difficulty, by ordering all tickets for lots in the "Struck District" to be withdrawn from the wheels; and by authorizing soldiers to return their patents for lots in this district and take lots elsewhere. The confusion leading to the Act of 1805 arose

out of the interpretation given by the Land Officers to the Act of April 2, 1802, which directed all the undrawn lots, not otherwise appropriated, and drawn lots not applied for, to be put into the wheels. It was supposed this included the lots in the "Struck District," and therefore the tickets, which had been withdrawn by order of the Council, were returned to the wheels. The Act of 1805 required these to be again withdrawn, and the lots opened to settlement. The settlements were ratified generally by the Act of 1813.

At the time when the Tenth Donation District was surveyed into lots, the northern boundary between Pennsylvania and New York had not been definitely surveyed and marked, and the Triangle at Erie had not been purchased. In consequence of this uncertainty, some of the lots in that district were surveyed within the State of New York, and within the Triangle. This led to acts to correct the errors and confer title to other lands, upon those whose lots fell therein.

The Act of September 30, 1791, reciting that after the running of the northern boundary, it appeared that some of the Donation Lots had been laid off in New York, directed the Surveyor-General to report to the Governor the patents granted for such lots, number of acres, and names of grantees, and requested the Governor to give public notice to all persons concerned to apply before December 1, 1791, on which day the Surveyor-General should ascertain the lots to be chosen (in a prescribed manner), in lieu of those lost, and of like quantity in the Donation Districts already surveyed, and not disposed of. New patents were to be issued, provided the applicant returned his former patent, and released the Commonwealth from any loss sustained.

The Act of April 10, 1792, extended the period of application until July 1, 1792. This was followed by the Act of April 5, 1793, which repeated the directions of the Act of September 30, 1791.

The Act of April 11, 1799, extending until September 1, 1799, the period for applying for Donation Lands, and regulating the mode of authenticating claims, would seem to embrace the applications for lands in lieu of those surveyed in New York.

By the Act of February 23, 1801, the Legislature again intervened for those whose lots had fallen in New York. The time of application was extended three years; the Board of Property was required to investigate suspected fraud, and disputes between applicants, and to call on the attorney, if any, to make oath that he had no interest in the claim. The board was to proceed in the manner directed in the thirteenth section of the Act of March 24, 1785.



Bentley Hall, Allegheny College, Meadville

The Act of April 2, 1802, already referred to, applies only to those lots which were supposed to have fallen within New York, but which were found to be in the Erie Triangle. The Act of March 25, 1805, in the first section coupled those whose lots were within the Triangle with those whose lots were within the "Struck District," and authorized them, on surrendering their patents, to receive therefore an equal quantity of unappropriated land, and obtain patents therefore. Section second continued the act in force until April 1, 1806. As to those lots within the Erie Triangle which had been drawn and patented, it was held by the Supreme Court that the purchase from the United States accrued to the benefit of the owners of these lots, who still retained them, on the principle in equity, that an after-acquired title is held in trust by a vendor for his vendee. No legislation was necessary to confirm their titles.

In regard to taxation of Donation Lands, the following decisions are of interest. In *Coney vs. Owen*, in which the subject was discussed by Chief Justice Gibson on one side, and Judge Kennedy on the other, it was held that exemption from taxation under the Acts of March 1, 1780, and March 16, 1785, is the personal privilege of the soldier, and that under the words of the tax law of 1804 general jurisdiction was conferred upon the county authorities to assess all unseated lands. The privilege, therefore, must be shown. As a consequence, a sale of such lands for taxes is good where the exemption is not shown; and when shown, though the sale is void, the purchaser at the tax sale is entitled to the value of his improvements. The exemption under these acts is limited to the life of the grantee and his ownership of the lot. Death or alienation subjects the lot to taxation. The case of *McCall vs. Coover* also decided this. The doctrine of *Coney vs. Owen* was not looked upon as just, though the decision was acquiesced in. In the case of *Jennings vs. McDowell*, it was held that without proof of death, after a great lapse of time and no acts of ownership, the death of the donee may be presumed, and a tax title held valid against an intruder, or one showing no title whatever.

THE WESTERN AND NORTHERN BOUNDARIES OF THE STATE, AND A PART OF THE SOUTHERN

The boundaries of Pennsylvania on the west and north are so intimately associated with the Depreciation and Donation Lands, and the subsequent titles, that a short review of them is appropriate.

On April 23, 1781, the Supreme Executive Council issued instructions to John Lukens and Archibald McClean, Esquires, to run and mark the State line between Pennsylvania and Virginia, according to the following agreement, made at Baltimore, August 31, 1779:

"We, George Bryan, John Ewing, and David Rittenhouse, Commissioners from the State of Pennsylvania; and we, James Madison and Robert Andrews, Commissioners for the State of Virginia, do hereby mutually, on behalf of our respective states, certify and confirm the following agreement, *viz.*: To extend Mason and Dixon's line, due west five degrees of longitude, to be computed from the River Delaware for the southern boundary of Pennsylvania, and that a meridian drawn from the western extremity thereof to the northern limit of said state be the western boundary of Pennsylvania forever."

Lukens and McClean, as Commissioners, were informed that it was expected they would be met by Commissioners on part of Virginia, but if not, they were instructed that the line should be ascertained and marked, in as strict conformity as possible to the above agreement, which had been ratified by the Legislatures of each State. The resolution of ratification of Pennsylvania was passed on September 23, 1780. The resolution of ratification by Virginia was, however, not satisfactory to the Pennsylvania authorities, and an act was passed, April 1, 1784, to prevent any countenance it might give to unwarrantable claims of title under Virginia. With these resolutions the agreement was again confirmed. The purpose was to save lawful rights, prevent unlawful intrusions, and preserve harmony between the states.

In the meantime a temporary line had been run in the autumn of 1782 by Alexander McClean on the part of Pennsylvania, and Joseph Neville on the part of Virginia, to prevent collision between the inhabitants of the two states. The authorities of Virginia had made claim to a large part of western Pennsylvania, embracing it in the district of West Augusta, and had erected the counties of Monongalia, Ohio and Youghagania, each interfering with Pennsylvania territory. Courts, magistrates, and officers had been established within this district; and officers of Pennsylvania had been arrested and imprisoned. The war spirit rose to a high pitch, and had nearly suffused the disputed soil with blood. Many Virginia surveys therein were made, and title granted by Virginia. Added to the alarming con-

dition of affairs between the people of the two states, Virginia had been invaded by the British; rendering the running and marking of a permanent boundary impossible for a time. A large correspondence took place between the president of the Supreme Executive Council of Pennsylvania and the Governor of Virginia, which will be found in the ninth and tenth volumes of the "Pennsylvania Archives." A most full and interesting account of those times will also be found in the "History of Washington County," edited by Boyd Crumrine, Esq., and published in 1882.

The temporary line referred to was confirmed by the Assembly on March 22, 1783, and a proclamation issued by John Dickinson, president of the Council, on March 20, 1783, giving notice and commanding obedience to this establishment of boundary. On March 26, 1784, instructions were issued to Dr. John Ewing, David Rittenhouse, John Lukins, and Thomas Hutchins, who had been appointed Commissioners on part of Pennsylvania, to run and finally determine the boundary line between this State and Virginia. The report of the Pennsylvania Commissioners was made at Philadelphia, December 23, 1784, enclosing the joint report of the Commissioners of both states, dated November 18, 1784. They ran the boundary and defined and marked the southwest corner of Pennsylvania from which the western boundary was to be run northward, to the northwest corner of the State, and fixed upon the sixteenth of May, 1785, to complete the work on the western boundary.

On April 9, 1785, instructions were issued to Dr. John Ewing and Mr. Hutchins to run and mark the western boundary. Dr. Ewing, being unable to accept, resigned, April 18, 1785, and Mr. Hutchins being absent, David Rittenhouse and Andrew Porter took their places. They, with the Virginia Commissioners, Andrew Ellicott and Joseph Neville, reported on August 23, 1785, that they had carried the meridian line from the southwest corner of Pennsylvania northward to the river Ohio, and marked it by cutting a vista over all the principal hills, felling and deadening trees through the lower grounds, and placing stones, marked on the east side P. and the west side V., accurately on the meridian. Here the duty of the Virginia Commissioners ended.

Under a resolution of May 5, 1785, David Rittenhouse, Andrew Porter, and Andrew Ellicott were appointed Commissioners to continue the western boundary north of the Ohio to the northwest boundary of the State.

These Commissioners began their survey from the Ohio northward on August 23, 1785. Fort McIntosh was then occupied by the Pennsylvania troops, under Lieutenant-Colonel Josiah Harmar, commandant. On the twenty-ninth, Messrs. Porter and Ellicott visited the fort, going up by water, and in a few days Dr. McDowell and Major Finney, from the fort, returned the visit. This was followed by a visit to the Commissioners on September 11, by Colonel Harmar and Major Doughty.

After carrying the line forward between forty and fifty miles the Commissioners suspended the work until the following year. The survey of the remainder of the line to Lake Erie was made in 1786 by General Porter and Alexander McClean. By a letter dated at "Shenango" Creek, June 25, 1786, they informed the Council that they began the extension on June nineteenth. On the twenty-third of September they reached a point 143 miles from the southwest corner of the State, and on the waters falling into Lake Erie. On Friday, September 15, 1786, they came to Lake Erie, a distance of 155 miles 226 perches from the southwest corner of the State. The angle formed with the northern boundary fell a short distance within the waters of the lake. At this time the Erie Triangle had not been purchased of the Indians and the United States, and the northern boundary was a straight line, intersecting the western as stated, leaving Pennsylvania without a harbor. An interesting account of the running of this western boundary will be found in the "Journal of General Andrew Porter," published in the fourth volume of the "Pennsylvania Magazine of History and Biography."

In determining its operation on the lands within the last purchase of the Indians in 1784 and 1785, it will be necessary to trace the northern boundary, except from the Allegheny River westward. A map of this part of the line is found at the end of the eleventh volume of "Pennsylvania Archives." The distance is about nine miles from the Allegheny to Conewango Creek, adopted as the eastern boundary by an Act of April 3, 1792, opening the lands westward to settlement and survey. This line ends in Lake Erie, a short distance from the shore end of the western boundary. Under a resolution of the Assembly of September 15, 1783, it was made the duty of the Commissioners to examine and ascertain where the northern boundary would fall, and whether any part of Lake Erie was within the State.

The Commissioners made two reports, the first, October 12, 1786, stating the running and marking of the line to the ninetieth milestone from the Delaware, on the western side of the south branch of the

Tioga River. This report was signed by Andrew Ellicott for Pennsylvania, and James Clinton and Simeon De Witt for New York. The second was made October 29, 1787, by Andrew Ellicott and Andrew Porter for Pennsylvania, and Abraham Hardenberg and William Morris for New York. It states the running and marking of the line in the forty-second parallel of north latitude, beginning at the Delaware River, and extending to a meridian drawn from the southwest corner of Pennsylvania, and that they had extended the line from the ninetieth milestone to Lake Erie, and marked the same permanently with milestones or posts surrounded with earth where stone was not found, well marked, with variations of the magnetic needle, and the distances; and on the south side, "Pennsylvania latitude 42° N., 1787"; and on the north side, "New York." This report was received November 29, 1787.

By an Act of Assembly of Pennsylvania, of September 29, 1789, the boundary as thus run was confirmed provisionally that the same should be ratified by New York. This act is valuable in the features that its preamble recites a full history of the proceedings relative to this boundary, and states particulars as to the execution of the commission, provided also for the perpetuation of the evidence by means of copper-plate maps, of which two hundred were to be printed *in perpetuam memoriam*. The line began at a stone monument upon a small island in the Mohawk branch of the Delaware, set upon the beginning of the forty-third degree of north latitude, and ran to Lake Erie, a distance of 259 miles and 88 perches. This line remained unchanged until so much of it as bounded the Erie Triangle was superseded by the purchase of that territory, to be related presently.

THE ERIE TRIANGLE

The running and marking of the northern boundary did not complete the present area of the State of Pennsylvania. But the location of the line brought out clearly the fact that she had no harbor or even convenient access to Lake Erie. This led her authorities to think of purchasing from the United States territory bordering on the lake and the northern boundary, which would furnish access and a secure harbor at Presque Isle. Measures were taken through the Pennsylvania members in Congress to acquire the territory lying between the western boundary of New York and Lake Erie, triangular in shape, and embracing the harbor at Erie.

A report was made by a committee appointed for the purpose of inquiry, read in the Assembly on November 9, 1787. Thereupon,

November twelfth, it was resolved to call upon the Supreme Executive Council to lay before the Assembly a description of the lands lying between the northern boundary of the State and Lake Erie, and an estimate of the sum necessary to purchase the same. On February 5, 1788, Vice-President Muhlenberg, on behalf of the Council, wrote to the members of Congress from Pennsylvania, enclosing the resolution, and requesting information upon the subject. His letter was answered February 28, 1788. General William Irvine, one of the members, on the twenty-third, introduced a resolution into the House, reciting the running of the northern boundary of Pennsylvania, and that the northwest corner extended into Lake Erie, cutting off a narrow strip of land from the territory of the United States; that by the cessions of New York and Massachusetts a line was to be drawn by which the said states were to be bounded on the west; and it was important to peace and harmony that this boundary line be run, and therefore directing the Geographer of the United States, in conjunction with the agents of these states, to run and ascertain their western limits.

A committee, consisting of Messrs. Clark, Irvine, Armstrong, Wadsworth, and Brown, to whom General Irvine's resolution was referred, reported upon it favorably, submitting a resolution to carry the purpose of the report into effect. This report was adopted June 6, 1788, and directions given to make the survey, and cause a return to be made to the Board of the Treasury, who were authorized to sell the tract in whole, at a private sale, for a price not less than three-fourths of a dollar per acre, in specie, or public securities bearing interest. Extracts from the deeds of cession to the United States by Massachusetts and New York will be found in the "Pennsylvania Archives."

The Supreme Executive Council, on June 14, 1788, authorized the President to inform our delegates in Congress that they were empowered to contract with Congress on behalf of the State for the purchase of these lands, at the rate of three-quarters of a dollar per acre, payable in specie, or in public securities bearing interest.

William Bingham and James R. Reid, two of the delegates, made the proposal for the purchase on the stated terms, on July 7, 1788, which was accepted by Samuel Osgood and Arthur Lee on behalf of the Board of the Treasury, August 28, 1788.

In pursuance of this contract, Congress by an act of cession and transfer, of September 4, 1788, completed the sale. The purchase was reported to the Assembly September 9, 1788, with an estimate of nine hundred and fifty pounds as necessary to carry out the negotiations.

On September 13, 1788, the Assembly confirmed the purchase and provided means for payment, describing the land as "a triangular piece or tract of country, situate, lying, and being on Lake Erie, bounded on the east by a meridian line, part of the western boundary of the State of New York; on the south by part of the northern boundary of the State of Pennsylvania, being a continuation of the line between this State and that of New York, from the western boundary of the said State till it intersects the said lake, including Presque Isle, and running northeasterly, or as the margin of said lake runs, according to the several courses thereof (with all benefit, property and



Scene in Elliott State Park Between DuBois and Clearfield⁴

advantages of the coast, bays, and inlets, on or near that part of the margin of said lake, which is the boundary of the country described, or intended so to be), till it meets the same meridian line before mentioned."

This completed the area of the State as it exists now, leaving the Indian title only to be extinguished. The treaty of Fort Harmar, January 9, 1789, whereby Cornplanter and other chiefs of the Six Nations signed a deed ceding the Presque Isle lands (the Erie Triangle) to the United States to be vested in Pennsylvania has been related in a previous chapter. Thus was the last remnant of Indian title to the soil of the State of Pennsylvania extinguished, in harmony

with the uniform, humane, and just policy of the Proprietaries and the State.

THE RESERVATIONS

An interesting subject now for consideration is that of the reservations by the State out of the lands north and west of the Ohio, Allegheny and Conewango. These were reserved expressly "*to the use of the State.*" The purpose was to prevent title being acquired by her citizens under the general laws relating to lands. A prime motive also was to enable her to dispose of the lands therein by special mode, in the manner best suited to her wishes and her interests. This mode will be referred to hereafter.

The two most important reservations are those found in the original Act of March 12, 1783, in these words: "*Reserving to the use of the State* three thousand acres in an oblong of not less than one mile in depth from the Allegheny and Ohio rivers, and extending up and down the said rivers from opposite Fort Pitt so far as may be necessary to include the same; and the further quantity of three thousand acres on the Ohio, on both sides of the mouth of Beaver Creek, including Fort McIntosh."

Other reservations were made, under subsequent laws, at Erie, Franklin, Waterford, and Warren. The first suggestion as to these seems to have come from Andrew Ellicott, in a letter dated at Baltimore, February 19, 1788. He was one of the Commissioners to run and mark the northern boundary of the State, and had noticed the general features of the country during his work. He stated in his letter that the situation of several places demanded the attention of the Legislature; and mentioned the mouth of the Conewango (Warren), the mouth of French Creek, where Fort Venango stood (Franklin); and the head of the navigable water of French Creek, at Fort Le Boeuf (Waterford). The purchase of the Erie Triangle was not then completed, and for this reason probably Erie was not mentioned.

On November 12, 1788, the Supreme Executive Council, by message, recommended the subject to the attention of the Legislature, and specified Presque Isle (formed by Lake Erie), Le Boeuf, and Conewango to be reserved to the use of the Commonwealth. A committee was appointed, who reported; and on March 24, 1789, the Assembly authorized the Council to have surveyed, for *the use of the Commonwealth*, of lands at Presque Isle (Erie), Le Boeuf, at the mouth of the Conewango, and at Fort Venango, not exceeding three thousand acres at each place.

In pursuance of this authority, the Council, on April 4, 1789, directed the Surveyor-General to appoint a proper person to locate, survey and return the several tracts mentioned. The Surveyor-General appointed to this service John Adlum, who, on April fourteenth, applied for money to make the survey. A committee of the Council reported they could find no money which with propriety could be advanced. On April twenty-eighth the Council refused the application, because of there being no appropriation for this purpose. Presumably the funds were afterwards supplied, as a report of the surveys of the four reservations was made by Mr. Adlum to the Supreme Executive Council, which, on September 16, 1789, was transmitted to the Assembly.

There is a private reservation, originating in the suggestion of General Richard Butler, which requires special notice. In a letter of March 23, 1789, addressed to the President and Council, he stated that Captain Abeal (Cornplanter), one of the principal chiefs of the Seneca Tribe of the Six Nations, had been very useful in all the treaties since that of 1784, inclusive, and his attachment to the State was very great. The general therefore suggested it would be good policy to fix his attachment, and also because of his ideas of civilization, to grant to him a small tract of land within the last purchase. He suggested one thousand or fifteen hundred acres. On the same day this letter was received, March 24, 1789, by the Assembly, the Council was ordered to set apart and survey fifteen hundred acres in the Triangle for the use of the Seneca chief, Captain Abeal, or the Cornplanter, to him and his heirs forever, in consideration of his personal merit and attachment to the State. The fact that Cornplanter requested and was awarded three other grants in lieu of the one within the Triangle has been related in a previous chapter.

There was a private reservation, called "General Irvine's," referred to in the Act of March 31, 1812, which Judge Agnew stated he had been unable to trace. He says: "possibly it is the same referred to in 13 Colonial Records, 776, yet this seems to be too early in date." More probably the reservation lay at the mouth of the Brokenstraw, where General Irvine is known to have had valuable land. On this subject, C. Hale Sipe says: "In gratitude for his distinguished services, Pennsylvania gave him a valuable tract of land below Erie known as 'Irvine's Reserve.'"

THE ALLEGHENY AND BEAVER RESERVATIONS

The Allegheny reservation contained in the Act of March 12, 1783, is in these words—*viz.*: "*Reserving to the use of the State three*

thousand acres, in an oblong of not less than one mile in depth from the Allegheny and Ohio rivers, and extending up and down the said rivers, from opposite Fort Pitt, so far as may be necessary to include the same." The leading words have been italicized to characterize the intention of the Legislature.

This reservation was surveyed by Alexander McClean, in the month of April, 1785, in pursuance of an order to make the survey before the other lands were surveyed. The northern boundary began on the right bank of the Ohio River, nearly opposite to the mouth of Chartiers Creek, and ran east nine hundred and seventy-two perches to a hickory tree, north eighty perches to a sassafras, east two hundred and twenty-nine and a half perches to a mulberry, north twenty-six perches to a post and stones on the bank of Girty's Run, thence down Girty's Run several courses—in all one hundred and three perches—to the Allegheny River. The two rivers constituted the remaining boundaries.

Judge Agnew refers to the amusing description of the Allegheny reservation given by David Redick, Esq., who was then a man of distinction in western Pennsylvania; at one time vice-president of the Supreme Executive Council, then a delegate to the Constitutional Convention of 1789-90, and after the organization of Beaver County, in the year 1803, one of its associate judges until his death in 1830.

In his letter to President Franklin of February 19, 1788, he wrote in derisive terms of this reservation. Among other things he said: "I am of opinion that if the inhabitants of the moon are capable of receiving the same advantages from the earth which we do from their world—I say, if it be so—this same famed tract of land would afford a variety of beautiful lunar spots not unworthy the eye of the philosopher." But time showed the fallacy of his views.

The policy of the State in all these reservations was to reserve them to herself, so that by special legislation, comprehending regulations, *minor reservations*, and wise provisions, they could be disposed of to suit the views of the Legislature.

Pursuing that design, the first act passed was that of September 11, 1787. It recited that "a sale of the said tract of land, if laid out and disposed of to the best advantage, will furnish a considerable sum of money towards discharging the debt due by the State." Therefore, to attain this end in the most serviceable manner to the State, it enacted, "That the President or Vice-President in Council are hereby empowered to cause to be laid out and surveyed a town, in lots, with a com-

petent and suitable number of out-lots for the accommodation thereof, in the said tract; and to cause to be laid out and surveyed the residue of the tract in lots, which last mentioned lots shall not be less than one acre nor more than ten acres each."

Upon the return of such surveys they were empowered to sell the whole of the said lots to the most advantage to the State, and to convey the same.

Then followed the important minor reservations required to preserve control, and to carry out the legislative design, *viz.*:

"That the President or Vice-President in Council *shall reserve* out of the lots of the said town, *for the use of the State*, so much land as *they* shall deem necessary for a court-house, gaol, and markethouse, for places of *public worship*, and *burying the dead*; and without the said town one hundred acres for a common of pasture; and the streets, lanes, and alleys of the said town and out-lots *shall be common highways forever.*"

The leading features have been italicized to indicate the intent of the Legislature; and to show the clear distinction between *reservations* and *dedications*. The places deemed necessary for public uses were detailed as reservations; while the streets, lanes, and alleys necessary as highways were *dedicated* at once to the public.

Judge Agnew called attention to a noticeable feature, indicating the views of that time, with respect to the inclusion of *houses of public worship* and *burial places*, as *public* uses. He said: "However singular this may appear to men of this generation having looser notions, at that early day this reservation accorded decidedly with their stricter notions of religious practice, under a Constitution which then required the members of Assembly to be sworn to a belief in God and in the divine inspiration of the Scriptures, and which declared that all religious societies or bodies of men united or incorporated for the advancement of religion and learning, or other pious or charitable purpose, should be encouraged."

In that day, and long anterior, churches were deemed objects of sacredness, and a great *public* blessing in their influence upon society, while burial was considered a paramount Christian duty. This spirit of the times is seen in the numerous laws for the protection of religion, religious societies, and their places of worship. Among these laws may be noticed the Act of May 6, 1731, and the Act of April 4,

1793, which evince the care and solicitude of the State for the preservation and protection of churches.

The records of some of these churches were the only depositories of births, marriages, and deaths. Those of Christ Church in Philadelphia were of so much importance that the Historical Society of Pennsylvania had deemed them worthy of publication in long lists, continuing through numbers of its quarterly. The Act of 1700 made such registries legal evidence. Judicial decisions have also recognized the value and importance of religious societies and churches, and even held that the Christian religion is a part of the common law of the State. The Legislature, also, in three acts, recognized churches and burial grounds as among *public uses* in the case of the Beaver reservation.

It is apparent, therefore, that places of public worship were deemed so vital to public morals and essential to the welfare of the people, they were a "*public use*" worthy of a place in the legislation relative to these reservations.

In the following year (1788), by the Act of September twenty-fourth, the county of Allegheny was erected out of parts of Westmoreland and Washington counties. The eighth section directed the trustees of the county to choose lots in the reserved tract opposite Pittsburgh for a courthouse and prison. But the region beyond the Allegheny River, being then uninhabited and subject to Indian incursions, the Act of April 13, 1791, repealed this provision, and authorized the trustees to erect these buildings in Pittsburgh.

In making the survey of the town under the Act of 1787, the plat was laid out a square, the sides coinciding nearly with the cardinal points of the compass, and a common of pasture laid around it, leaving the larger part lying to the north of it, and the smaller to the south. Hence the different parts have been called North, East, South and West common. This common later became the public park of Allegheny City, now a part of the city of Pittsburgh. Four center squares in the town plat were reserved for the public uses specified in the act.

The next law of importance relative to this reserve tract was the Act of March 3, 1818, directing the Western Penitentiary to be erected on the public land adjoining the town of Allegheny, and requiring the Councils of Pittsburgh to appoint a Commission of five persons to select a suitable site, to contain not less than ten acres "of the public land." The site was selected on the west common, and the

penitentiary built, and from time to time enlarged, until later removed to the right bank of the Ohio.

The owners of lots entitled to common of pasture made no objection to the selection and erection. The State held the title to the land on which the common was laid out, subject only to the use for pasture. On this ground the grant for the erection of the penitentiary was sustained, as stated by Chief Justice Tilghman in the case of the *Western University vs. Robinson et. al.* It was the understanding of the



Municipal Reservoir, DuBois

lot-owners (he said) that the advantage of the erection of the penitentiary on the common ground was for their interest, without further compensation, and having acquiesced their rights were released.

The university stood, however, in a different attitude, and there being no evidence of acquiescence by the lot-owners, the grant to the university of forty acres laid off upon this common would not be supported aversely to the right of pasture. The grant to the university was under the Act of February 18, 1819. This case settled an important principle applicable to both of these reservations under the Act of March 12, 1783, that the title to the land in the *minor reservations* in the town lands remains in the State. This principle was applied with force in several cases.

The case of *Carr vs. Wallace* recognized the right of the Commonwealth to dispose of the land itself, subject only to the commonage of the lot-owners, which could be relinquished by consent. In that case Carr was estopped in equity by reason of his supineness, and permitting the theological seminary to expend money in building and improving, without notice of his dissent, under the Act of April 17, 1827. It was further held in this case that the right of common was appurtenant to the in-lots, and not to the out-lots, and that the right was divisible by alienation of a part of a lot. This ownership of the State in the land reserved was recognized in other cases.

The most important act bearing on the subject is the charter of the city of Allegheny, passed April 13, 1840. The thirteenth section is in these words: "That the right of this Commonwealth to all lands within said city mentioned in the fourth section of the Act of Assembly of the eleventh September, 1787, excepting such parts thereof as have heretofore been appropriated by grant and authority of law, is hereby granted and vested in the said city of Allegheny, *for such public uses* as are recited in said act, and such *other public uses* as the Select and Common Councils may from time to time direct and ordain." This act thus expressly declares the title to all the unsold lands (including therefore the *minor reservations*) to be in the State, and vests it in the city, for the recognized public uses.

The *designation* of the public uses in the reserved squares was thus transferred by the State to the City Councils, and was enlarged to embrace other public uses equally necessary, but not specified in the original act; for example, a town hall and council chambers, public offices, engine houses, etc.

The powers of the Councils were considered and defined in the case of the Commonwealth *vs. Rush*. In order to obtain funds to pay city debts the Councils had directed one of the reserved squares in the center plat to be laid off into forty lots and sold. A lot was sold to a purchaser who was proceeding to erect a house thereon. He was enjoined against on the ground that this was not a lawful exercise of the power of the Councils. It was held that the charter of the city vested the right only for such *public uses* as are recited in the Act of 1787, and such other *public uses* as they might direct, but lots sold for *private* use were not such. It was also held that the dedication was *not* general but *special* only, for such public uses as should be within the power conferred on Councils. The judge said the Act of 1840 does not, and cannot alter the original act, but places it in the power of the Councils to *designate* the particular parts of the square to be occupied

for a market house, public buildings, churches, etc. He thought, also it would extend to a town hall, or a *public useful* building. He held also that *unlike* a public square dedicated generally, it could not be considered as a *common or public highway*. "This is the evident distinction between the declaration of a use (a present specification of the use) and a dedication to public use generally," says Judge Agnew. The opinion of Judge Hepburn was sustained and adopted in the Supreme Court.

The case of *Bell vs. Ohio & Pennsylvania Railroad Company* followed, decided by a divided court, one judge not sitting. Chief Justice Lewis held in his opinion that the right of common was appurtenant, not appendant, and was extinguished by the act of the plaintiff in purchasing part of the land which was subject to the easement.

The next case, *Allegheny City vs. Ohio & Pennsylvania Railroad Company*, was decided also by a divided court, one judge not sitting. Chief Justice Lewis held that the railroad, as a highway, was a public use, and, as such, fell within the power of the Councils; who could lawfully grant fifty feet of the common for this use. The decree, however, was made by four of the judges restraining acts of the company outside of the fifty feet, and acts within it not strictly for use as a highway.

The effect of the legislation recited and the judicial decisions thereupon is clear; that under the Acts of 1787 and 1840 there is *no general dedication* of the public squares, but a reservation only for certain public uses specified in the Act of 1787, and such other *public* uses as the Councils should specify under the Act of 1840, and that the squares reserved are not reserved in such a sense as to make them public highways within the decisions in *Commonwealth vs. Bowman* and a like class of cases, holding public squares to be dedicated to a general public use—that the common was dedicated to a private use (for pasture) leaving the title and the ground under the control of the State subject only to the use, which may be extinguished by consent or estoppel in equity.

THE BEAVER RESERVATION

This reservation is contained in the same Act of March 12, 1783, and is in these words: "And the further quantity of three thousand acres on the Ohio and on both sides of the mouth of Beaver Creek, including Fort McIntosh."

This reservation was surveyed probably in the month of April or May, 1785, but the original return is not to be found in the Land

Office. The boundaries are as follows: Beginning at an elm on the Ohio River, thence running north two degrees and a half west three hundred and seventy-five perches to a white oak—south eighty-seven and a half degrees west ninety-seven perches to a white oak—north two and a half degrees west one hundred perches to a white oak—south thirty-seven and a half degrees west three hundred and ninety-one perches to a maple on the margin east side of Beaver River—thence from a stake on the west side of the Beaver, south two and a half degrees east one hundred and ninety-six perches to a white oak—south eighty-seven and a half degrees west five hundred and eighty-seven and a half perches to a post and stones—south six hundred and forty-one perches to the Ohio River. The Ohio constituted the remaining boundary.

The first act relating to this reservation was that of September 28, 1791, authorizing the Governor to lay out a town and out-lots for the uses therein mentioned. Referring to the Act of 1783, it empowered the Governor to direct the Surveyor-General to survey two hundred acres of land in town lots, on or near the ground where the old French town stood, in such manner as Commissioners appointed by the Governor should direct; and also one thousand acres adjoining on the upper side thereof in out-lots, as nearly square as may be, of not less than five acres nor more than ten acres each, "provided that the Governor shall *reserve* out the lots of the said town so much *land* as he shall deem necessary for *public use*." The words in this proviso have been italicized to draw attention to their true character. It was *land*, not lots merely. This land was *reserved*, not dedicated, and it was for *public uses*, not specified, but left to be declared by competent authority. This the Legislature, the only authority, has done from time to time.

On the return of the surveys to the Surveyor-General the Governor was authorized to sell one equal half of the town lots, and the whole of the out-lots, to the best advantage, and convey the same, "*excepting* always such as shall be *reserved* for public uses."

By the third section the streets, lanes, and alleys of the town and out-lots were *dedicated* as common highways forever.

The survey under the Act of 1791 was made by Daniel Leet, in the month of November, 1792, but in the absence of the Commissioners whose duty it was to direct the survey. In consequence of this want of authority on the part of Leet, the Act of March 6, 1793, was passed, confirming the survey, repealing the appointment of Commissioners, and authorizing the Governor to sell and convey the lots con-

tained in the survey, but subject to this important provision: "In the same manner and under the *same regulations, exceptions, and reservations*, as are prescribed in the said recited Act of the General Assembly," viz., of September 28, 1791.

The Governor, acting under this provision, by a writing dated March 11, 1793, directed the Surveyor-General to mark the *reservations* required by the Act of 1791, upon the survey of the town plat, including the squares which Leet had without authority marked as public squares on his plat. On the next day, March 12, 1793, the Governor issued his commission to sell, with instructions. The fifth instruction was in these words: "That the four lots in the center and the corner lots of the town plat marked 'Public Square,' shall be announced as lands deemed necessary for public uses, and *reserved* by the Governor accordingly."

The effect of this action of the Governor was to bring these reserved squares within the intent and meaning of the reservations in the Act of 1791, and thus to prevent the unauthorized act of Leet in marking them as "Public Squares" from giving to this entry on the plat the appearance of a dedication of these squares to the public generally. This left the uses subject to the appointment of the Legislature, as first intended, which was afterwards exercised.

The next disposition of the reserved tract was a grant of five hundred acres, to be laid off by actual survey, adjoining the town of Beaver, "for the use of such school or academy as may hereafter be established by law in the town of Beaver." This was accordingly done by laying off the land on the southwest side of the town plat, embracing all the land running southwesterly down and by the Ohio River to the end of the elevated plain below Beaver. The direction is contained in the seventeenth section of the Act of March 12, 1800, the same law erecting the counties of Beaver, Butler, Mercer, Crawford, Erie, Warren, Venango, and Armstrong. The trustees appointed for Beaver County were Jonathan Coulter, Joseph Hemphill, and Denny McClure.

Another appropriation of the reserved tract by the Legislature was made in the Act of March 29, 1802. The Surveyor-General was authorized to survey two separate lots, containing in the whole not more than fifteen acres, on the north side of the in-lots of the town of Beaver, so as to include several streams or springs of water; "and they are hereby granted to the inhabitants of said borough forever." This is the act incorporating Beaver into a borough. It will be

observed that the grant was to the "inhabitants." The act confers no power over the lands granted upon the corporation. Nor does it confer on the corporation any power over the *reserved squares*.

By the Act of February 21, 1803, four trustees, *viz.*, John Lawrence, Guion Greer, James Alexander, and Samuel Johnston, were appointed to take charge of the land granted under the Act of 1800 for an academy. The trustees were empowered to erect a suitable building on one of the *reserved squares* in the town of Beaver for an academy. This power was exercised at an early day, the building being erected on the middle lot of the southeast reserved center square. It remained in use many years; Judge Agnew says: "probably as late as 1860."

Beaver County was organized for judicial purposes under the Act of April 2, 1803. In this act the Legislature again exercised its power over the reserved squares by authorizing the Commissioners to erect a courthouse, prison, and public buildings on such part of the public squares in Beaver as they might think proper. Until a courthouse should be erected the courts were to be held in the house of Abner Lacock, in Beaver. The courthouse and offices were erected on the northwest center reserved square, and the prison on the northeast center reserved square.

The next sale of the town and out-lots of Beaver was authorized by Act of March 2, 1805. John Lawrence, Samuel Wilson, and David Potter were empowered to sell one-fourth of the town-lots of Beaver, "*excepting those heretofore reserved for public uses,*" and one-fourth of the reserved tract at the mouth of Beaver in lots not less than five nor more than ten acres each. A condition in the sales of the in-lots was that each purchaser should, within three years from the time of sale, build on his lot a house at least one story high, measuring not less than twenty-four by eighteen feet, having a chimney, and fit for the accommodation of a family. If not so improved the lot should revert to the Commonwealth. The time for making this improvement was extended to the first day of September, 1811, by Act of March 20, 1810.

A sale of all of the remainder of the Reserve tract was ordered by the Act of March 14, 1816, to be made by William Leet, John Wolf, Sr., and James Dennis, who were empowered to survey it in lots of not less than five and not more than ten acres in each. The purchase money was to be paid within two years and patents issued. But on failure to pay, the Secretary of the Land Office was authorized on payment of the purchase money and interest by any other person, to

issue a patent to him. The limitation in this section was continued twice, the second until January, 1824.

The Legislature again exercised its power to appoint the uses over the squares reserved for public uses. The fourth section of the Act of March 14, 1814, enacted, "that the public square in the northwest corner of the general plan of the town of Beaver, which was *reserved* for public purposes, be and the same is hereby *appropriated* for a burial-ground." This is again a direct legislative assertion that these *reservations* had not been *dedicated*, and was an exercise of the power to declare the uses.



Municipal Playgrounds, DuBois, Showing American Legion Building in Left Background

The next sale of lots in Beaver was under the Act of March 5, 1816. The Commissioners were James Alexander, Guion Greer, and James Logan. They were directed to sell all the remaining lots, yet the *property* of the Commonwealth, "*excepting* those heretofore *reserved* for public uses." One-half of the purchase money was to be paid previous to the third Tuesday of December, 1816, and the other half on or before the third Tuesday of December, 1817. On failure to pay the purchase money for one year, the Secretary of the Land Office was authorized to issue a patent to such person as would pay the sum due. This act again asserts that the reserved lots were the property of the Commonwealth.

The Act of April 10, 1826, was the next authorizing the sale of the out-lots. The Commissioners were Thomas Henry, Joseph Hemp-hill, and Robert Moore. The purchase money was payable one-fourth in hand, and the remainder in three equal annual installments. Five hundred dollars of the proceeds were granted to the borough of Beaver for the supply of water.

The last sale authorized was under the Act of April 15, 1834. James Lyon, Benjamin Adams, and James Eakin, Jr., or any two were empowered to sell at public sale all the lots which had reverted to the Commonwealth laid out by John Lawrence, Samuel Wilson, and David Potter, under the Act of March 2, 1805, "*excepting* those heretofore *reserved* for public uses"—and also all the lots sold by James Alexander, Guion Greer, and James Logan, under the Act of March 5, 1816, which reverted to the Commonwealth—the purchase money payable one-fourth in hand and the remainder in three equal annual installments, patents to be issued on payment being made. Five hundred dollars of the proceeds of the sale were granted to the borough of Beaver for the supply of water.

The next exercise of the power of the State over the *reserved* squares was contained in the Act of March 29, 1824. It appropriated a part of the southeast center square to the Presbyterian congregation of Beaver, for a church, with a yard not exceeding one-quarter of an acre. The trustees were James Allison, Thomas Henry, David Marquis, David Eakin and Edward Waggonner. This was followed by a similar appointment to the use of a Methodist Episcopal Church; contained in the Act of April 10, 1826. The fifth section empowered Benjamin Adams, Robert Darragh, Milo Adams, Joseph Vera, and John T. Miller, trustees for the Methodist Episcopal Church, in the borough of Beaver, "to erect a church or house of worship on the southeast section of the public square in the town of Beaver, between the Academy and the southeastern boundary of said public square, and to inclose a yard not exceeding one-fourth of an acre."

These last two declarations of public uses were in the direct line of the legislative thought as seen in the other reservation at the mouth of the Allegheny River. Both Acts of 1787 and 1791 were the twin product of the same legislative intent which created these reservations of three thousand acres each. The Allegheny Act expressly included "places for public worship and burying the dead." The former act, says Judge Agnew: "was evidently before the draughtsman who drew the latter (1791), but its enumeration of uses being manifestly defective, in not including other customary buildings, such as town halls,

public offices, engine buildings, weigh-scales, etc., he rejected the method of enumeration, and reached the same end in a better way by saying '*for public uses.*'" This embraced all buildings for uses deemed necessary, convenient, or proper, including houses of public worship and burial grounds expressly named in the Allegheny Act. Another conclusive evidence of the reserved legislative control over the uses, is seen in the Act of 1840, conferring on the Councils of the city of Allegheny the power to declare *other* public uses, besides those named in the Act of 1787. Under this authority the city erected extensive public buildings, including all its city offices, a town hall, and the post office. It is impossible to interpret the Act of 1791 without referring to its immediate predecessor of like character, the Act of 1787.

In all the acts relating to the Beaver reservation, and they were numerous, the minor reservations are called *reservations*, not *dedications*. The only dedications were of the highways, streets, lanes and alleys.

RESERVATIONS AT ERIE, FRANKLIN, WARREN AND WATERFORD

As has already been stated, the Supreme Executive Council, in 1788, in consequence of the suggestion of Andrew Ellicott, recommended to the Assembly the subject of reservations at the mouth of the Conewango, Venango, and Le Boeuf. The Assembly, by a resolution of 1789, authorized the Council to have surveys, not exceeding three thousand acres, made for the use of the State at these places and at Erie, the "Triangle" by this time having become the property of the State. The surveys were made by John Adlum, and reported to the Council, and transmitted to the Assembly in September, 1789.

The original survey of the Erie reservation by John Adlum is not to be found in the Land Office. As otherwise ascertained the boundaries appear to be these: Beginning on Lake Erie, thence south twenty-seven degrees east nine hundred and seventy-nine perches to a post; south fifty-three degrees west two thousand five hundred and ninety perches to a post; north twenty-seven degrees west ninety-three perches to Lake Erie; the lake constituting the remaining boundary.

On April 3, 1792, the Act of Assembly was passed opening to warrant settlement and survey the lands north of the Ohio and west of the Allegheny and Conewango Creek. The thirteenth section directed to be *reserved for the use of the State* at Presque Isle, formed by Lake Erie, the island forming the harbor, and a tract extending eight miles along the shore of the lake, and three miles in breadth, so as to include the tract already surveyed by virtue of a resolution of the Assembly,

and the whole of the harbor formed by Presque Isle at the mouth of Harbor Creek, which empties into Lake Erie, along the shore on both sides of said creek, two thousand acres.

This was followed by the Act of April 18, 1795, to provide for laying out and establishing towns and outlots within the several tracts of land heretofore *reserved for public uses*, situated at Presque Isle (Erie), mouth of French Creek (Franklin), mouth of Conewango Creek (Warren), and Fort Le Boeuf (Waterford). It recited the purpose to facilitate and promote the progress of settlements within the Commonwealth, and afford additional security to the frontiers thereof.

The Governor was directed to appoint two Commissioners to survey sixteen hundred acres of land in town-lots, and thirty-four hundred acres adjoining for out-lots, at or near Presque Isle. The streets were to be not more than one hundred and not less than sixty feet wide; and such lanes, alleys, and reservations for public uses made as the Commissioners should direct; no town lot to contain more than one acre, and no out-lot more than five acres, and the reservations not more than twenty acres. The town should be called Erie, and all the streets, lanes, and alleys be common highways forever.

A draft of the survey was required to be filed in the office of the Secretary of State; and the Governor was authorized to sell at public auction and on advantageous terms one-third part of the town lots, and one-third part of the out-lots, on the condition that the purchasers should, within two years after the sale, build on each town lot sold a house sixteen feet square, containing at least one brick chimney; patent not to be issued for two years, and not to vest title, and all previous payments to be forfeited, unless the condition be performed, and proof thereof made in the Court of Common Pleas, and certified to the Governor.

The act further required one-half of the purchase money to be paid within three months from the time of sale, and the other half, with interest, within one year; and in case payment be not so made, the sale to be void.

The Commissioners were also required to survey, previous to the survey of the town and out-lots, sixty acres on the southern side of the harbor of Presque Isle, one-half above and the other half below the bank, including the point at the entrance of the harbor; one lot of thirty acres on the peninsula at or near the entrance of the harbor; one other lot on the peninsula containing one hundred acres for the accommodation and use of the United States, in erecting and maintaining

forts, magazines, arsenals, and dockyards, and other improvements deemed advantageous by the United States. Exception was made of mill-seats on the creek near the old French Fort, if they fell within the cession to the United States. Convenient roads also were to be made without injury to the United States for the use of the citizens; and nothing in the act should be deemed to cede or transfer to the United States the jurisdiction or right of soil in the said lots, but only their occupancy and use.

The Commissioners were required to survey also three hundred acres for town lots, and seven hundred acres adjoining thereto for out-lots on the reservation at the mouth of French Creek, the town to be called "Franklin"; and also three hundred acres for town lots, and seven hundred acres adjoining thereto for out-lots on the reservation at the mouth of Conewango Creek, the town to be called "Warren."

In each case the lands should be laid out into town lots and out-lots, with streets, lanes, and alleys, and *reservations for public uses*, as the Commissioners should direct; no town lot to contain more than one-third of an acre, and no out-lot more than five acres, and the reservations for public use not to exceed ten acres. The streets, lanes, and alleys were established as common highways forever.

A draft and report of the survey in each case (Franklin and Warren) were required to be returned and filed, and the Governor to proceed to sell at public auction and convey to the purchasers one-third of the town lots and one-third of the out-lots in like manner, power and authority, and subject to like regulations, terms, conditions, and forfeiture, as provided in relation to the town lots and out-lots at Presque Isle.

None of the returns of surveys by John Adlum, of the reservations at Erie, Waterford, Warren and Franklin, are to be found in the Land Office, except that at Waterford. It is supposed they were lost when the Rebels raided Pennsylvania, or so displaced they cannot be found. All the papers of the Land Office were hurriedly thrown into boxes, barrels, and hogsheads, and carried to a place of safety. The head fell out of a hogshead, and possibly other accidents happened. The papers dropped out and were scattered and torn. On their return many papers were found in pieces, and others were not to be found at all.

As to the reservation at Le Boeuf, a different provision was made. The ninth section recited the survey of a town by Andrew Ellicott at Le Boeuf, near the head of navigation of French Creek, and the plan communicated by the Governor to the Assembly and approved. It

then enacted that the plan of the town so surveyed being first recorded in the office of the Secretary of the Commonwealth, and the original deposited in the office of the Surveyor-General, should be fully ratified and confirmed, as if made in pursuance of a previous law. The Commissioners were required, further, to survey five hundred acres adjoining the town plot for out-lots, with streets, lanes and alleys; no out-lot to contain more than five acres, and the *reservations for public uses* not to exceed in the whole ten acres. The town was to be called Waterford, and the streets, lanes and alleys of the same and of the out-lots to be common highways forever.

The description, as taken from Adlum's survey of the reservation at Le Boeuf (now Waterford), is as follows: "Beginning at east branch of Le Boeuf or French Creek at a sugar tree, thence north eighty-one perches to a hemlock, west one hundred and thirty-four perches to a white oak, north one thousand one hundred and thirty perches to an ash, east two hundred and seventy perches to a white pine, south one hundred and sixty perches to a post, east two hundred and seventy perches to a white pine, south one hundred and sixty perches to a post, east two hundred perches to a black ash, south one hundred and five perches to a white thorn, east forty perches to a beech, south seven hundred and thirty-two perches to a hickory, thence down French Creek to the beginning, containing three thousand and seventy-three acres and one hundred and fourteen perches."

A further provision for Waterford was a right of preëmption to those who had built houses on the lots therein. The Governor was required to sell at public auction one-third of the lots, and one-third of the out-lots, *exclusive of the reserved* lots, and of those appropriated to settlers, in like manner and subject to like regulations, restrictions, terms, conditions, and forfeitures touching the survey, return, sale and conveyance of the town and out-lots at Presque Isle.

It was provided as to all these towns that one-half of the town lots and the out-lots to be sold in pursuance of the act, should be sold in the city of Philadelphia, one-fourth in Carlisle, and one-fourth in Pittsburgh.

The remainder of the act relates to the military establishments at Fort Le Boeuf, and a fort to be established at Presque Isle. A cession was also made to the United States for military purposes of two out-lots of the town of Franklin by Act of February 1, 1796.

The next legislation was a general act for selling the reserved tracts at Erie, Franklin, Warren, and Waterford, April 11, 1799. It provided for actual surveys of the parts of these reservations not

before laid out in town and out-lots not exceeding one hundred and fifty acres in each, designating in the drafts the quality of each as first, second, and third quality. It granted five hundred acres to be laid off in each reservation for the use of such schools or academies as might be established by law in the said several towns. The surveys were to be returned to the Surveyor-General, and the general drafts thereof to the office of the Secretary of the Commonwealth.

After these drafts were lodged as stated, copies were to be transmitted by the Governor to the Commissioners for sales of the towns; who were to give notice of the opening of the books, and the terms of sale were one-fifth of the purchase money in hand, one-fifth in twelve months, one-fifth in two years, and the remainder in three years. No contract for sale was to be complete for fifteen days after the opening of the books and then the highest price offered to be accepted. The mode of proceeding by the Commissioners was prescribed. The following important condition was declared. No title should vest unless the purchaser within three years after purchase made an actual settlement thereon, by clearing, fencing, and cultivating at least two acres for every fifty acres contained in one survey and erecting a messuage fit for the habitation of man, and residing thereon for five years from his first settlement. In default of such actual settlement, residence, and improvement, the purchaser should forfeit all payments, and the land be open to sale again.

The fourth section required the Governor to appoint four resident Commissioners in each town, who with two to be appointed by the judges of the Common Pleas of Allegheny County, should appraise all the in-lots and out-lots in Franklin, Warren, and Waterford, and the first section in Erie, and out-lots adjoining. The Commissioners were to advertise the town for sale on the terms one-third of the purchase money payable in hand, one-third to the Receiver-General in twelve months, and the remainder in eighteen months, for which bond should be given by the purchasers, the Governor to grant patents at the expiration of the eighteen months if the purchase money be paid.

Provision was made that those who had purchased lots in the second and third divisions of Erie might exchange for lots in the first division at the same price they had paid. Those who had paid for or improved forfeited lots should have a preëmption at the prices they sold for at former sales, provided they applied within three months after the passage of the act.

The sixth section provided for the sale of the lot of ground reserved in Erie at the mouth of Cascade Creek at a price not less than fifty dollars an acre.

The Act of February 19, 1800, repealed so much of any law which imposed on purchasers of lots in Erie, Franklin, Warren and Waterford the condition of improving the same, and which prohibited the issuing of the patent without proof of such improvement. It extended also the time of application of those entitled to the preëmption of forfeited lots to twelve months. This period was also extended by Act of February 26, 1801, for one year from that date.



Bradford Post Office

By the Act of March 29, 1805, the first section of the town of Erie was incorporated into a borough. This law conferred on the borough certain powers over parts of the reserved land for water-lots and wharves.

Two thousand dollars arising from sales of lots and out-lots in Erie were appropriated to public county buildings in Erie, by Act of March 16, 1807.

A supplement, March 20, 1811, provided for the appraisement and sale of all the in-lots in squares, and the out-lots in the second

extension of Erie. Two reputable citizens were to be appointed by the Governor, who, with the Commissioners of sales, should make the appraisement. The Commissioners were then to advertise and open books, and the highest price offered within sixty days was to be accepted, payable one-third in hand, one-third to the Secretary of the Land Office in twelve months, and the remaining one-third in two years, bonds to be taken and transmitted to the Secretary of the Land Office, and patents granted at the expiration of two years if purchase money be paid.

This act also provided that a part of the beach for twenty perches back from the water's edge, and from the upper corner of the Garrison tract down to lot No. 38, the property of John Kelso, should be and remain a public landing for the use of the public, until otherwise appropriated by law, and provided penalties for any obstruction thereof.

The State also ceded to the United States the use and occupancy of a part of the Erie reservation, containing not less than two nor more than four acres for the site and erection of a lighthouse, to be laid off by Daniel Dobbins, James Weston and James Pollock, as Commissioners, upon consultation with at least three of the captains or commanders of vessels. A plat or draft was to be made of the lot and transmitted to the Secretary of the Treasury of the United States.

The United States, having long before ceased to maintain a garrison at Presque Isle, and having vacated the lots at Waterford reserved for the use of the United States by Act of April 18, 1795, and the buildings fast going to decay, in order to preserve them the State by Act of March 20, 1812, provided Commissioners, *viz.*, Thomas Wilson, John Boyd, and John Lytle, to take charge of the property with power to lease, receive the rents, and pay them to the treasurer of Erie County for the use of the county; the leases to be relinquished whenever the property should be wanted for the use of the United States or any other purpose. Provision was also made by the third section of the Act of March 31, 1812, for issuing patents for fourteen out-lots of five acres each adjoining the out-lots of the first section of the town of Erie, not included in Thomas Ree's survey, sold by the Commissioner of Sales without authority of law.

An enabling Act, passed February 5, 1817, authorized the borough of Erie to lease several, not exceeding ten, water-lots to the United States for a term not exceeding twenty-one years, and appropriate the rents to the improvement of the borough.

By the Act of March 25, 1817, incorporating an academy to be established at Erie, the five hundred acres appropriated out of the reserved land at Erie for the use of an academy in the Act of April 11, 1799, were granted to the incorporated academy. Certain other lots, by number, were also granted to the academy, on which to erect buildings. A supplement vested in the trustees lot No. 2544, and empowered them to sell fifteen other lots in Erie, and with the proceeds to purchase four other lots.

These acts relating to the academy at Erie were followed by the Act of March 28, 1820, authorizing the trustees to receive \$2,000 out of the balances unpaid on out-lots in the reservation at Erie for which patents had not been granted. Various provisions to carry this into effect were added.

A supplement to the Waterford Act authorized the Secretary of the Land Office to issue a patent to the trustees of the academy at that place for eight lots in Waterford marked B, in the general plan on which the United States buildings had stood, to be disposed of by the trustees as they should think best for the academy.

A further supplement authorized the trustees of the Waterford Academy to sell to the best advantage and convey the tract of five hundred acres laid off, in the reserved tract adjoining Waterford, under the Act of April 11, 1799, for a price not less than \$10 an acre, and the proceeds invested for the use of the academy.

The last important act now properly to be referred to was that of March 23, 1818. It extended the limit in the third section of the Act of April 11, 1799, for making settlement, improvement, etc., on purchased lots until the first day of April, 1824. The second section required the persons entitled to the benefit of this extension to pay in addition to the purchase money an advance of twenty per cent. for rent and interest on the whole sum from the time the interest commenced on the original purchase money.

Of the foregoing reservations the same may be said as has been said of the reservations at Allegheny and Beaver. They were not *dedications* to the public, but *reservations* to the State herself. They were products of the same thought, and bear the same interpretation: that is, her reservation for public uses were to enable her to declare them in such manner as would be beneficial to herself as well as to the public. Hence she constantly passed laws controlling and disposing of them as she deemed best for all interests, her own and others.

GENERAL DISPOSITION OF THE LANDS UNDER THE
ACT OF APRIL 3, 1792

The last, and most important, division of the subject, is the general disposition of the lands in the region north of the Ohio River and west of the Allegheny River and Conewango Creek.

The prime intention of the State, as already stated, was to reward the soldiers of the Pennsylvania Line in the Revolutionary War for their meritorious services; to raise money; plant population in advanced positions for the protection of the western border of the State, and to facilitate improvement. These objects she had provided for in the redemption of the certificates of depreciation given to the soldiers, donations to them in land for their services, and by reservations at important points, for speedy sales, to raise money, and invite settlements.

These patriotic purposes left large sections of territory undisposed of. All of the western territory, excepting a small portion on the eastern side of the Allegheny River, adjacent to Fort Pitt, was wild and uninhabited, and subject to Indian incursions. From 1780 until 1795 there was no safety from invasion and massacre. In 1782 Colonel Crawford was defeated, and burned at the stake, with a barbarity and suffering almost incredible. In the same year Hannastown, in Westmoreland County, was ravaged, and thenceforward the country from Fort Pitt to Wheeling was constantly threatened. General Harmar was defeated on the Miami in 1790, and General St. Clair in 1791; and in 1792 General Wayne began his preparation for his Indian campaign, which lasted until 1795. This condition of the western country bore directly upon the legislation of 1792.

The General Assembly of Pennsylvania, conceiving in that year that the time had come to make a general provision for the sale and settlement of this territory, passed the Act of April 3, 1792, entitled "An Act for the sale of the vacant lands within this Commonwealth." After providing for the sale of the remainder of the unsold lands lying within the purchase of the Indians in 1768, the Act offered all the land lying north of the Ohio River, and west of the Allegheny River and Conewango Creek—excepting such parts as had been, or thereafter should be, appropriated to any public or charitable purpose—to persons who would *cultivate, improve, and settle* upon the same, for the price of seven pounds ten shillings for every one hundred acres, with an allowance of six per centum for roads and highways, to be located and secured as provided in the act.

Judge Agnew says: "To understand the evils of this legislation, and the vice which led to the greatest litigation and uncertainty of title which ever ruined the prosperity of a new country, and set it back many years, it may be stated in this place that the Assembly committed the sin of enacting a duplex and adverse system of acquiring title, which placed Land Office rights and settlement claims in direct hostility to each other, and led to a contest in the courts and on the lands, which lasted until long after the writer came to the bar." One mode was the purchase of a warrant at the Land Office for a tract of land to be surveyed thereupon, not exceeding four hundred acres and the allowance of six per cent., the grantee paying the purchase money and fees of office into the State Treasury; to be followed by actual settlement and improvement. The other mode was by an actual settlement and improvement, in the first instance, made upon a tract not exceeding four hundred acres and allowance by any person desiring to settle, improve, and reside upon the same. In both instances a survey was required to be made by the deputy surveyor of the district in which the land lay. The warrant was so called because in its terms it was an authority or order to the Surveyor-General to survey a tract applied and paid for, and the Surveyor was required to make the survey thereof forthwith. On the other hand, an actual settlement and improvement being made, the eighth section of the act required the deputy surveyor of the district, upon the application of the settler, to make a survey of the tract upon which he had settled, and enter it on his books.

Had there been no Indian war probably there would have been fewer adverse claimants to the same tract. The settlers under warrants and those for improvements for themselves, would have gone onto the lands at an early date, and priority of entry would then have settled many disputes. But while those who desired to acquire land by settlement and improvement were prevented by Indian hostility, the capitalists, having money, and being near to the Land Office in Philadelphia, proceeded at once, procured their warrants, and lodged them in the hands of the deputy surveyor for execution. Hence much the largest number of the warrants were taken out in 1792. On April 3, 1792, the day of the passage of the law, Daniel Broadhead, then Surveyor-General, took out two warrants for lands lying on Walnut Bottom Run, opposite the great falls of the Beaver where the town of Beaver Falls now stands. On April 14, 1792, the largest proportion of the warrants was taken out by John Nicholson, then the Comptroller-General of the State, and others, which afterwards became the

property of the Pennsylvania Population Company. Another large number of warrants was taken out in April, 1792, and April and August, 1793, in behalf of a foreign company known as the Holland Company. Besides, there were many individual capitalists who purchased or afterwards became the owners of these early warrants, such as Judge James Wilson, Benjamin Chew, Archibald McCall, and other eastern residents. So great was the collective number of the warrants that, in the language of the old residents, the country was "thumbed over" from the Ohio to the Lake. Surveys on these warrants were made generally in 1794 and 1795. As a consequence they would have given undoubted titles had it not been for the terms of the ninth section of the Act of April 3, 1792, which were variously interpreted by lawyers, courts and people. This section provided that no warrants or survey of these lands should vest title unless the grantee had prior to the date of the warrant made, or *should within two years after the date* of the same, make an actual settlement thereon, by clearing two acres for every one hundred in the survey, erecting a messuage and residing thereon for five years. The section then provided for a forfeiture of the land in case of a default in these requirements.

But the Indian war continued without abatement. In the winter of 1792-93, General Wayne encamped his army at Legionville and, in a previous chapter, his training of his men there and his successful campaign, resulting in the defeat of the Indians has been related. His treaty of peace with the Indians was made August 3, 1795, and was ratified by the United States on December 22, 1795. This became the first signal of safety for entry and settlement on these lands. Only a few very adventurous spirits had gone on before, chiefly in the vicinity of the forts. The spring of 1796, became, therefore, the period when the largest wave of settlement rose, and the settlers took possession.

The current opinion among the settlers, the result partly of legal advice, partly of self-interest, and to some extent of ignorance and hostility to capitalists who had bought up the lands, was that the owners of the warrants, by reason of non-entry settlement and improvement, within the two years from the date of the warrants according to the requirements of the ninth section of the Act of April 3, 1792, had forfeited their titles, and the lands were open to entry and settlement. As a consequence the settlers sat down upon the lands they selected, regardless of the surveys made on the warrants. This led at once to alarm among the warrant holders, and to steps to vindicate their rights.

To understand properly the events following, it is necessary to state the different interpretations placed upon the ninth section of the law. The settlers believed the warrants were absolutely void, or "dead," as they said, by reason of non-settlements, etc., within two years from their date. The warrant-holders, whom we shall call "warrantees" in the language of that day, held that the condition of settlement being *subsequent* was absolutely gone by the prevention of the enemies of the United States (the Indians), and by their persistence to settle within the two years. The legal profession in the western part of the State held an intermediate interpretation, that neither the warrants were void, nor the condition of settlement gone; but that the latter was only suspended until the prevention ceased,



(Holmes Crosby, Architect)

Odd Fellows Children's Home of Western Pennsylvania

which ended with the ratification of the treaty of peace on December 22, 1795; and then, resuming its force, the warrantees had two years, *viz.*, until December 22, 1797, to perform the conditions by making the required settlement, etc.

Some of the ablest lawyers in the State were then in the western part thereof. Judge Agnew furnishes the following list of lawyers admitted at the first court held in Beaver County in February, 1804: Alexander Addison (Judge), Thomas Collins, Steele Sample, A. W. Foster, John B. Gibson (the Chief-Justice), Sampson S. King, Obadiah Jennings, William Wilkins, James Allison, John Simonson, David Redick, Parker Campbell, David Hays, C. S. Sample, Henry Baldwin, Thomas G. Johnston, Isaac Kerr, James Mountain, Robert Moore, William Ayres and William Purviance. To these he adds James Ross and John Woods, of Pittsburgh and says that many of these gentlemen became in after life eminent in the State and the United States.

Connecting itself with the current of events as to these warrant titles, it may be said also that the Assembly, containing many farmers, sympathized largely with the settlers; while some of the judiciary, drawn from the East, looked favorably upon the cause of the warrantees.

The Assembly, perceiving that so many of these lands had been taken up under warrants, and not settled, and fearing that the prime intent of the Act of 1792 was being frustrated by non-settlement, on April 22, 1794, passed an act forbidding, after June 15, 1794, more warrants for unimproved lands within "that part of the Commonwealth commonly called the New Purchase, and the triangular tract upon Lake Erie," except in favor of persons claiming the same by virtue of some settlement and improvement being made thereon, with a proviso in favor of certain persons who had credit balances due to them in the Land Office on certain unsatisfied warrants, who were allowed until the first day of January, 1795, to take out warrants upon such credits. Still more effectually to guard the settler's interests the act provided that no warrants, except wherein the land is particularly described (technically known as "descriptive warrants"), should in any manner affect the title or claim of any person having made an actual improvement before such warrant is entered and surveyed in the deputy-surveyor's books. The office of the deputy-surveyor being in the district in which the land lay was thereby convenient of access to the settlers, and his books gave notice of the lands appropriated.

The interference in favor of the settlers was more decided in the Act of September 22, 1794, in these words: "That from and after the passing of this Act no applications shall be received at the Land Office for any lands within this Commonwealth, except for such lands whereon a settlement has been or hereafter shall be made, grain raised, and a person or persons residing thereon." The second section annulled all applications on file after April, 1794, on which the purchase money had not been paid. Provision was also made for the benefit of certain credits in the Land Office, and for patents. This act extended to the whole State, and included, therefore, these lands and the triangle at Lake Erie.

On the other hand, the officers of the Land Office and the Board of Property, down to about the year 1800, held that the condition of settlement was extinguished and wholly gone, by the prevention caused by the Indian war, and a persistence to make settlement during the

two years from the date of the warrants. There was evidence of this persistence on part of the Holland Company. On this ground the Board of Property, as then composed, granted to the Holland Company eight hundred and seventy-six patents, and so late as February 4, 1799, granted numerous patents to the Pennsylvania Population Company. These patents became known as "Prevention Patents." But a change in the administration of the State Government took place by the election of October, 1799. Thomas Mifflin had been the Governor from 1790 until 1799, when Thomas McKean succeeded him, remaining in office until 1808. A different doctrine was held by the Board of Property under Governor McKean, and it was now held that the Indian war merely *suspended* the required settlement under the ninth section of the Act of April 3, 1792.

The Holland Company having renewed its application for prevention patents, the Secretary of the Land Office refused to issue them. The company thereupon instituted proceedings by *mandamus*, in the Supreme Court, against Tench Coxe, Esq., the secretary, to compel him to issue the patents.

As several companies played conspicuous parts in the great controversy under the ninth section of the Act of 1792, it is proper to notice them briefly.

The Holland Land Company, consisting of a company of Holland capitalists, had had large sums of money invested in America during the Revolutionary War. After the declaration of peace, concluding not to remove their money, they purchased large bodies of land chiefly in New York. They invested also in Pennsylvania, first in lands, surveyed in large tracts, generally of one thousand acres each on the east side of the Allegheny River within the purchase of 1784. After the passage of the Act of April 3, 1792, they purchased many warrants of four hundred acres each, to be located on the west side of the Allegheny and the Conewango, and within the Erie Triangle. They purchased and paid for eleven hundred and sixty-two warrants of four hundred acres in Districts Nos. One, Two, Three, Six and Seven. These were issued for them in April, 1792, and in April and August, 1793. They were surveyed chiefly in 1794 and 1795. This company took the lead in the litigation referred to.

The Pennsylvania Population Company was next in importance. John Nicholson, the Comptroller-General, soon after the passage of the Act of April 3, 1792, applied for three hundred and ninety warrants, to be located within the Erie Triangle, and two hundred and fifty warrants to be located on the waters of Beaver Creek. He then

organized the Pennsylvania Population Company, of which he became president, and Messrs. Cazenove, Irvine, Leet, Hoge, Mead, and Stewart, managers. Nicholson conveyed his claims to this company, they paying the purchase money to the State, and in addition paying for five hundred more warrants. The capital of the company consisted of twenty-five hundred shares, laid out in the purchase of five hundred thousand acres of land. Their first general agent was Ennion Williams, who belonged to the Society of Friends. He was appointed May 26, 1795, and February 1, 1805. Their next general agent was Enoch Marvin, appointed May 2, 1809. These gentlemen figured largely in the controversies with the settlers; both, however, being gentlemen of kindly feeling and just views.

For the purpose of performing the condition of settlement under the Act of 1792, this company offered to persons willing to settle their land, and make proof of the settlement to obtain the patents, a gratuity of one hundred and fifty acres; and, in many instances, also sold to them an additional quantity, at a certain price, the whole not generally exceeding two hundred acres.

The company dissolved in the year 1812, and their lands passed chiefly to William Griffith, of New Jersey, and John B. Wallace, of Philadelphia. These gentlemen soon failed, owing to the disastrous times following the war of 1812-15, ruining not only them but many others. Much insolvency prevailed in Pittsburgh in the years from 1821 to 1824.

Mr. Griffith and Mr. Wallace divided their lands, Griffith taking the contracts of settlement and sale, and Wallace the unseated and unsold lands.

Griffith's interest finally passed into the hands of William Meredith and John Day, assignees of Maurice Wurtz and William Wurtz of Philadelphia, the largest part of Mr. Wallace's going to the Farmers & Mechanics' Bank, of Philadelphia, to which he was indebted. The deed to the bank is dated December 1, 1818. The names of many Philadelphians of that time appear therein as warrantees in the schedule. In the practice of the Land Office only one warrant could be issued to one person. Hence the capitalists who purchased many warrants were compelled to use the names of many persons, who afterwards made over to them the legal title by "deeds poll." This custom was so general that the courts recognized these persons as trustees for those who paid the purchase money and the surveying fees. As the evidence of the identity of the persons paying the purchase money certain "blotters" in the Land Office, known as

John Keble's Blotters, became famous, in which he had entered the names of purchasers of warrants, etc. These were much used in the trial of ejectments.

In 1806, the board of managers of the Pennsylvania Population Company consisted of James Gibson, president, and Paul Busti, William Crammond, Henry Drinker, Jr., Thomas Astley, and John Waddington, managers. The titles of the company were vested in John Field, William Crammond, and James Gibson as trustees, who afterwards conveyed to Robert Bowne, a new trustee. All these names appear frequently in the titles to these lands.

In January, 1812, the stockholders of the company having dissolved the association under the terms of their agreement, directed all their estate, real and personal, to be sold at auction, and appointed James Gibson, Henry Drinker, Jr., Thomas Astley, William Griffith, John B. Wallace, and William Crammond, as managers and agents to attend to the business. All their estate, real and personal was sold at auction at the Merchants' Coffee House in Philadelphia on June 29 and 30, 1812.

The North American Land Company was one of vast proportions, formed in 1795, in Philadelphia by Robert Morris, John Nicholson, and James Greenleaf. Its investments were largely in other states, chiefly in New York. But little is known of this company in this State, excepting that during the latter part of the last century the settlement of its affairs underwent judicial investigation in Philadelphia.

The mandamus case, to which reference has been made, of the Commonwealth *vs.* Tench Coxe, brought at the instance of the Holland Land Company to compel the issuing of patents to them is to be found in "Fourth Dallas' Reports," 170 to 205, and furnishes a very full history of the controversy between the warrantees and the settlers. It contains, also, the form adopted and approved by Attorney-General Ingersoll for the certificates of prevention, framed to obtain the patents, since known as "Prevention Patents."

This case brought up the question of the interpretation of the ninth section of the Act of April 3, 1792; which is in the following words: "That no warrant or survey, to be issued or made in pursuance of this act, for lands lying north and west of the rivers Ohio and Allegheny, and Conewango Creek, shall vest any title in or to the lands therein mentioned, unless the grantee has prior to the date of such warrant made or caused to be made, or shall within the space of two years next after the date of the same, make or cause to be made,

an actual settlement thereon, by clearing, fencing, and cultivating at least two acres for every hundred acres contained in one survey, erecting thereon a messuage for the habitation of man, and residing, or causing a family to reside, thereon for the space of five years next following his first settling of the same, if he or she shall so long live, and in default of such actual settlement and residence, it shall and may be lawful to and for this Commonwealth to issue new warrants to other actual settlers for the said lands, or any part thereof, reciting the original warrants, and that actual settlements and residence have not been made in pursuance thereof, and so as often as defaults shall be made for the time and in the manner aforesaid, which new grants shall be under and subject to all and every the regulations contained in this act. Provided always, nevertheless, that if any actual settler or any grantee in any such original or such succeeding warrant shall by force of arms of the enemies of the United States be prevented from making such actual settlement, or be driven therefrom, and shall persist in his endeavors to make such actual settlement as aforesaid, then, in either case, he and his heirs shall be entitled to have and to hold the said lands, and in the same manner as if the actual settlement had been made and continued."

The controversy centered around the provision in the section in regard to the time of persistence in making the settlement, and the effect of the Indian war upon it, by extinguishment or suspension of the condition. Chief Justice Shippen held that "the Legislature could only mean to exact from the grantees (warrantees) their best endeavors to make the settlements within the space of two years from the date of their warrants, at the end of which time, if they have been prevented from complying with the terms of the law by the actual force of the enemy, as they had justly paid for the land, they are entitled to their patent."

Justice Yeates delivered the opposite opinion, which may be summed up in the paraphrase which he made of the ninth section, *viz.*: "Every warrant-holder shall cause a settlement to be made on his lands within two years next after the date of his warrant, and a residence thereon for five years next following the first settlement, on pain of forfeiture by a new warrant. Nevertheless, if he shall be interrupted or obstructed by external force from doing these acts within the limited periods, and shall afterwards persevere in his efforts in a reasonable time, after the removal of such force, until these objects are accomplished, no advantage shall be taken of him for a want of a successive continuation of this settlement."

Justice Smith concurred with Justice Yeates and Justice Brackenridge gave no opinion, having been retained at the bar for the Holland Company. He had also acted as attorney for settlers in some western cases.

This doctrine followed previous decision in respect to the nature of a settlement, which required a personal residence as its prime characteristic, and not mere *improvements* on the land.

But the Commonwealth *vs.* Coxe did not end the controversy on the ninth section. The Assembly was memorialized on both sides. This brought about the Act of April 2, 1802, to raise what was known as the "Feigned Issue," to try the questions in dispute. The preamble



McKean County Court House, Smethport

recites in full the ninth section of the Act of April 3, 1792; the difficulties and disputes between the warrantees and settlers; the inability to secure a fair trial where so many persons are interested; and the fact that the Holland Land Company and the Population Company had applied to the Supreme Court for a *mandamus* to compel the Secretary of the Land Office to complete their titles; and also the complaints of these companies, and the applications of the settlers to the Legislature for redress. It then proceeds to require the Supreme Judges to meet and devise a form of action for trying and determining the question, whether or not the warrants are void against the Commonwealth by reason of non-settlement; and whether grants of the Land Office are good founded upon prevention certificates given by Justices of the Peace, without other evidence of the nature and circumstances being given. The form thus devised by the judges was to be transmitted to the Governor, who, with the assistance of the

Attorney-General, was to carry it into effect. By it the questions of law and fact were to be heard and decided at Sunbury before the judges of the Supreme Court and a jury. It was made competent, also, for the jury, under the constitutional direction of the court, to decide upon the law and the facts, and, if they thought proper, to bring in a general verdict. Any of the parties could give evidence of the prevention certificates, and of the circumstances of the country at the time to which the certificates related, and any other fact tending to illustrate the questions aforesaid. Further instructions were given to the judges to provide for the admission of parties and for notices, and to require the Secretary of the Land Office to attend the trial, with such books, papers, and documents as they may specify, or he may deem material.

It is evident by the mode of decision of the law and fact by the jury, no injustice was intended to be done to the settlers. As a further protection, and to prevent confusion of title and lawsuits, it was enacted that the Secretary of the Land Office should grant no new warrant for land which he had reason to believe had already been taken up under a former warrant. On every application filed, proof should be made by one disinterested witness that the applicant was in actual possession, specifying the time when possession was taken. If the decision of the court and jury should be in favor of the settlers, warrants were to be granted on payment of the purchase money according to the priority of application.

The Governor was authorized to appoint not more than two counsel to assist the Attorney-General.

The case was made up and known as the Attorney-General *vs.* The Grantees under the Act of April, 1792, and is found in "Fourth Dallas," 237 to 245. Judges Yeates, Smith and Brackenridge met at Sunbury on November 25, 1802, a jury was empanelled, and the case argued by Attorney-General McKean, W. Tilghman, and Cooper. Chief Justice Shippen did not attend. No one represented the Grantees, the Holland Company having declined to appear, but their reasons for not discussing the subject were given in a letter to the judges dated June 21, 1802. The decision in the case of the Commonwealth *vs.* Coxe having been made by the same majority of the judges, it is probable that the Chief Justice and the Holland Company thought it useless to attend.

The case was heard *ex parte*, and the opinion delivered by Judge Yeates, following in the track of his former opinion in Coxe's case. He also discussed, with reference to authorities, the doctrine of pre-

cedent, and *subsequent* conditions; arriving at the same conclusions he had before reached.

The decision may be summed up as follows:

1. "Prevention by force of arms of enemies does not absolutely dispense with and annul the conditions of actual settlement, improvement, and residence; but it suspends the forfeiture by protracting the limited periods. Still the condition must be performed by the warrantee *cy pres* whenever the real terror arising from the enemy has subsided, and he shall honestly persist in his endeavors to make such settlement, improvement, and residence, until the conditions are fairly and fully complied with.

2. "The patents and the prevention certificates recited in the patents are not conclusive evidence against the Commonwealth, or any person claiming under the Act of 3d April, 1792, of the patentees having performed the conditions enjoined on them, although they have pursued the form prescribed by the Land Office. But the circumstances of recital of such certificate will not *ipso facto* avoid and nullify the patent if the actual settlement, improvement, and residence, pointed out by law, can be established by other proof."

The jury found a general verdict for the plaintiff, and judgment was rendered in favor of the Attorney-General against the Grantees.

The Holland Company, however, was not content to abide by the decisions of the State Court. Another action was brought, therefore, in the Circuit Court of the United States, sitting at Philadelphia, before Judge Washington, of the Supreme Court of the United States, and District Judge Peters. The case is entitled Huidekoper's Lessee *vs.* Douglass. The plaintiff claimed title under the Holland Company, and the defendant was a settler under the Act of April 3, 1792. In order to test the question fully, the case went up, by a division of opinion of these judges, to the Supreme Court of the United States. The opinion in the latter court was delivered by Chief Justice Marshall, holding the law otherwise than as decided by the State court. The result is thus stated:

"A grantee by warrant under the Act of 1792, who by force of arms of the enemies of the United States was prevented from settling and improving said land and residing thereon from the 10th of April, 1793, the date of the warrant,

until the first day of January, 1796, but who during the said period persisted in his endeavors to make such settlement and residence, is *excused* from making such actual settlement as the enacting clause of the ninth section of the said law prescribes, to vest a title in the said grantee."

And further, in such case the grantee

"persisting in his endeavors to make such settlement and residence, vests in such grantee a *fee simple* in the said land; although, after the said prevention ceased, he did not commence, and within the space of two years thereafter, clear, fence, and cultivate at least two acres for every hundred acres contained in his survey for the said land, and erect thereon a messuage for the habitation of man, and reside or cause a family to reside thereon for the space of five years next following his first settling of the same, the said grantee being yet in full life."

The effect of this judgment in favor of the warrantees would have been disastrous upon the interest of the State. As nearly the whole section north of the Ohio and west of the Allegheny and Conewango (excepting the sold Depreciation and drawn Donation Lots had been taken up under warrants numbered by the thousand, it would have left this portion an unsettled wilderness, in violation of the fixed policy of the State to fill it up with settlers under the *warrants*, as well as with those settling for themselves. But the question being purely a State one, and her judges not being bound by the doctrine of the Supreme Court of the United States (except in single cases of exceptional jurisdiction), they persisted in their interpretation of the ninth section of the Act of April 3, 1792, in order to maintain the well settled and absolutely essential improvement policy of the State, and their opinion became the law of the titles under that act.

Yet there were judges of the State, who, bound by and following the State decisions, thought the opinion of Chief Justice Marshall the only sound doctrine of the act. Such was the opinion of Chief Justice Gibson, whose early impressions were eastern, and whose earlier opinions were not always followed by himself in later years. Judge Agnew says:

"Notably this was the case in the application of the doctrine of the Statute of Limitations in cases between warrantees and settlers. He began in the strictest *pedis possessio* of the

settler, as announced in *Miller vs. Shaw* (7 S. & R. 137), and ended in the extreme doctrine of a *presumptive* ouster, as labored in *McCall vs. Nealy* (3 Watts, 71), a doctrine which lay at the bottom of the famous tilt between Black and Lewis in *Barney Hole's Case*."

Judge Agnew says:

"It seems to me, however, that the interpretation of the ninth section of the Act of 1792, as given in Huidekoper's *Lessee vs. Douglass*, cannot be sustained. It will be seen that Chief Justice Marshall regarded the section as inconsistent and repugnant in terms, and therefore changed its reading in order to reach the conclusion he came to. It will be noticed also that his interpretation is wholly *literal*, so much so it is obnoxious to the maxim, *qui haeret in litera, haeret in cortice*; and fails to regard the most important feature which characterized the whole law. Had he recurred to the second section he would have been impressed with its *express* language, which accorded with the entire current of the legislation of the State in reference to these wild lands. It reads thus: 'That from and after the passing of this Act, all other lands belonging to this Commonwealth, and within the jurisdiction thereof, and lying north and west of the rivers Ohio and Allegheny, and Conewango Creek, except such parts thereof as heretofore have been, or hereafter shall be, appropriated to any public or charitable use, *shall be and are hereby offered for sale to persons who will cultivate, improve, and settle the same, or cause the same to be cultivated, improved, and settled, at and for the price of,*' " etc.

In direct accordance with this language the ninth section was made applicable to *warrantees* as well as settlers. It says:

"no warrant or survey . . . shall vest any title in or to the lands therein mentioned unless the grantee has, prior to the date of such warrant, made or caused to be made, or *shall within the space of two years after the date of the same, make or cause to be made an actual settlement thereon*, by clearing," etc.

Again, this section applies to original settlers as well as warrantees, and therefore must be construed in view of the expressed purpose of the act to apply to both classes.

Thus the law never offered these Western lands for sale, except upon the very condition of settling the same, and thus carrying population into the new country. Besides, this was in accord with all other legislation, expressing this policy of the State, and to be considered *in pari materia*. This policy is stated in various acts and in express language in the preamble to the Act of April 18, 1795, laying out the towns of Erie, Franklin, Warren, and Waterford, *viz.*: "In order to facilitate and promote the progress of settlements within this Commonwealth, and to afford additional security to the frontiers thereof."

The effect of the doctrine of the United States Court would have left this entire northwest region an unreclaimed wilderness, without power in the State to remedy it. For a title *vested in fee* by prevention, would leave the lands under the sole control of the grantees who pay their money, and they could settle or sell them when and how they would please. These lands would have become the subject of mere speculation to be sold in block or otherwise, as the interests or fancy of the capitalist owners might have dictated.

The State doctrine was not only in accord with the general policy of the State, as set forth in the acts referred to, but with the very purpose, intent, and language of the Act of 1792 itself. Besides, it did no injury to the warrantees. They were bound to make a settlement and improvement, and the State doctrine merely *suspended* performance, giving them the opportunity of complying with the condition required in order to "vest title." They were favored by delay, not injured, in view of the express language of the laws.

It will be seen, therefore, it was the merest technicality to apply the common law doctrine of *subsequent* conditions, in ordinary contracts between man and man, to a question of great State policy, intended to serve the welfare of a frontier population and important State interests.

Again, the State courts, as the logical consequence of their doctrine, held that the warrantee was protected against any adverse entry before December 22, 1797; in other words, until two years had expired after the ratification of the Treaty of Fort Greenville. And, further, they held that an adverse entry was still unlawful, even after December 22, 1797, without a vacating warrant procured from the State.

Several acts of the Assembly had a bearing on these titles, first the Act of April 22, 1794. It provided that no application should be received after the passage of the act for unimproved land in the new

purchase or the Triangle at Erie. Also that no warrant should issue after June fifteenth for lands in the new purchase and the Triangle, except to persons claiming by settlement and improvement; and all applications on file after that date on which the purchase money had not been paid should be void. Exceptions were made in favor of persons who had credits for balances due in the Land Office. Another provision in favor of settlers was that indescriptive warrants should not affect their title by actual improvement before the entry of the warrant on the deputy-surveyor's books.



Crawford County Court House, Meadville

This was followed by the Act of September 22, 1794, which forbade the receiving of applications for land in any part of the Commonwealth except for lands on which a settlement has been made, grain raised, and a person residing thereon. It also made void all applications filed after April 1, 1784, on which the purchase money has not been paid. There was a proviso in favor of a person having a credit in the Land Office.

Then came the act before referred to on which the feigned issue was raised, *viz.*, April 2, 1802. The fourth section provided that after its passage no new warrant should be granted for land the secretary had reason to believe had been taken up under a former warrant, and provided for filing the application and giving a copy to the applicant.

At the end of this section is an important provision, which, being omitted in the edition of Purdon of 1830, led to important results to be referred to hereafter.

Following the Act of 1802, an act was passed April 3, 1804, which during its limited existence of two years was important to the settlers. Within that time it gave the effect of vacating warrants to the applications of settlers under the Act of April 3, 1792, describing particularly the lands applied for, and vouching such other requisites as are provided for in the Act of September 22, 1794. The act was entitled "An Act for ascertaining the right of this State to certain lands north and west of the rivers Ohio and Allegheny and Conewango Creek." The second section authorized the Governor to employ able counsel to attend to the interest of the State in pending suits in the United States Court.

This act was continued in force until the first of April, 1807, by an Act of April 28, 1806. In *Shippen vs. Aughenbaugh*, decided in 1806, Judge Yeates held that an application under the Act of 1804, in the nature of a vacating warrant, taken out after suit brought, was not evidence.

In *Jones vs. Anderson* the Act of 1804 was discussed in the Supreme Court by S. B. and A. W. Foster on one side and by Semple and Baldwin on the other. It was again held that an application under the Act of 1804, after suit brought, was not competent evidence. This case also decided that an entry by a settler before the termination of the two years allowed the warrantee after the ratification of the Treaty of Peace, was *ipso facto* a prevention, and gave no inception of title as against the warrantee. The doctrine of illegal entry by the settler within the two years is reasserted in *Barnes vs. Irvine*.

We may now refer to the controversies under the vacating warrant clause of the ninth section of the Act of 1792. As has been stated, the State courts held that an entry by a settler, even after December 22, 1797, was unlawful, without having obtained a vacating or new warrant. It was so held because the Commonwealth had by the terms of the section prescribed this as the only mode of asserting her own title. Owing to ignorance, bad advice, and presumption, few settlers, after December 22, 1797, had availed themselves of the statutory mode of acquiring title after the default of the warrantee. Still, owing to the unsettled state of the country, and the difficulty of pursuing their claims in the local courts, the warrantees generally suffered delay. A few, by reason of non-residence in the State brought suits

in the United States Court in Philadelphia, there being no Western District in Pennsylvania until the year 1819. But those who brought suit in the East found great difficulty in enforcing their judgments by execution. The spirit of resistance prevailed so sternly among the settlers, who thought the attempt to oust them from their homes was ruthless, it became difficult to serve legal process. An instance of this occurred in Beaver County, in 1808. William B. Irish, the marshal, in attempting to deliver possession in the case of William Fulks, a settler on Little Beaver Creek, was waylaid and fired upon, and one of his posse, a man named Hamilton, was killed.

The consequence was that the titles in northwestern Pennsylvania remained unsettled for many years. In 1810 Mr. Smith, in the second volume of his edition of the "Laws," page 205, refers to this state of affairs in these words:

"The population and improvement of the country have been imperilled and restricted. Nineteen years have elapsed, but the dispute is still undecided; and whilst to the north and to the west of these controverted lands the country increases with industrious citizens and smiles with cultivation, here the half-finished cabin and remaining forests proclaim that the land is without a certain owner."

This state of title led to a new course of legislation in the hope of ending disputes by compromise between the warrantees and settlers. The first act is that of March 20, 1811, "for the settlement of certain disputed titles to lands north and west of the rivers Ohio and Allegheny, and Conewango Creek."

The preamble recites that the improvement of these lands is still impeded. That the opinion is entertained that persons calling themselves the Holland Land Company, the Population Company, and North American Land Company, and others claiming lands by warrants forfeited their titles and claims by non-performance of the condition of settlement, etc., that this title still remains in the Commonwealth, and that actual settlers have entered and claim title, and in some cases have suffered judgments in ejectment, and finally the importance of settling these disputes.

It enacts that in all cases of agreement between the original warrant-holder and settlers, and where the required settlement and improvement have been made according to the Act of 1792, the Commonwealth releases her claims. Where an actual settler has

entered and made the required settlement and improvement, and has compromised with the original warrantee by receiving one hundred and fifty acres surveyed to him, or where either has purchased the right of the other, the Commonwealth ceases to have further claim, and will confirm the title. And where a settler has made an adverse actual settlement and improvement, and purchased a part of the tract to include and secure his improvement, the Commonwealth will release title on the warrantee conveying one hundred and fifty acres of the tract in consideration of the settlement. And an actual settler who has entered and within two years made the improvement required, but has abandoned the tract before the full time of residence has been completed, shall, on return and completing his actual settlement, be entitled to the benefits of this act. So an actual settler who had been evicted by legal process shall be entitled to the benefit of the act upon the warrantee releasing to him one hundred and fifty acres and allowance by survey, or if either party purchase the right of the other the Commonwealth will cease to have claim to the tract, and will ratify the title. Where no settlement has been made, but the warrantee, before the first of June, 1814, shall agree with any person to make the settlement before that day, and will agree to release to him one hundred and fifty acres and allowance by survey, and the settlement shall be made according to the law, the Commonwealth will cease to have claim and will confirm and ratify the title. Certain other provisions were made respecting prevention patents, new warrants already taken out, granting of patents, and evidence to be produced, etc., etc. The act ended with this proviso: That nothing should prevent the Commonwealth from asserting her right of forfeiture under the Act of 1792, where the warrantees and settlers fail to embrace the provisions of this act.

The terms of this act are conclusive of the prime and lasting intention of the State to provide for the actual settlement and improvement of these wild lands.

Those parts of the Act of 1811, which would expire by limitation, were revived and continued until April 1, 1824.

Probably the most important legislation changing the condition of the warrantees and aiding the course of the settlers is found in the Act of March 24, 1814. Prior to this act it was a presumption, from the state of the country and the Indian war, as held by the courts, that the warrantee was prevented from making the required settlement and improvement before the ratification of Wayne's Treaty on December 22, 1795.

The act is entitled "An Act explanatory of an Act for the sale of vacant lands within this Commonwealth," and enacts that before a warrantee for land north and west, etc., shall recover against an actual settler or his representative, he shall prove to the satisfaction of the court and jury that he was individually and in fact prevented by the enemies of the United States from settling the land, and that within two years from the date of his warrant he did persist; and what acts of persistence were made; and that his warrant was fairly obtained and executed. Then came a proviso which enabled him to preserve his right, and at the same time enabled the settler to obtain the one hundred and fifty acres contemplated in the compromise Act of 1811. This was a conveyance by the warrantee to the settler of one hundred and fifty acres within two years. If the settler refused to accept it, he lost the benefit of the Act of 1811. This act was continued in force until April 1, 1824, by Act of April 2, 1822.

In the case of *Bedford vs. Shilling* it was decided that this act did not extend to suits commenced by warrantees against settlers before its passage. The advantage the Act of 1814 intended to confer upon the settler received a severe shock in the case of *Ross vs. Barker*, which overthrew all its supposed protection; that case deciding that in certain aspects the act would be unconstitutional, and in certain others it would be useless. Under the decision in *Ross vs. Barker* its operation, if any it could have, was limited to a narrow compass.

The controversy under the ninth section of the Act of April 3, 1792, was, however, brought substantially to an end by the Act of April 3, 1833, which dispensed with the settlement, and provided that a patent might issue to the warrantee without proof of settlement, etc. But it provided that the act should not impair the rights of settlers already acquired, and that such patent should not be given in evidence against the settler where the title would come in question.

This Act of 1833 was the last important act of legislation upon that long drawn out litigation between warrantees and settlers. Then came the controversy in the Supreme Court itself, on the subject of new or vacating warrants.

In the case of *Skeen vs. Pearce*, decided in 1821 (the true name was *Skeer*), the Supreme Court—consisting of Tilghman, Gibson, and Duncan—decided very positively that a settler could not enter upon warranted land to make a settlement under the Act of 1792, without a vacating warrant under the ninth section; several cases were cited for this. But a new doctrine was advanced in the case of *Campbell vs. Galbraith*. In the meantime the Supreme Court had been enlarged in

number, and was composed of Gibson, Chief Justice, Huston, Kennedy, Rogers and Ross. The new judges were not so adherent to the claims of the warrantees, and, as a consequence, there was a better feeling towards the claims of the settlers. This became more evident in another branch of title to be adverted to hereafter. The opinion was delivered by Judge Kennedy, with a concurring opinion from Judge Huston; Judge Ross took no part, and Gibson and Rogers acquiesced on a ground stated by Gibson, in the case of *Barnes vs. Irvine*, noticed hereafter. Judge Kennedy conceded that the prior doctrine of a presumptive prevention *ipso facto*, by the entry of the settler within the time allowed to the warrantee for the making of an actual settlement was sound. But on the question whether the settler could enter without a vacating warrant after the time had elapsed for performance of the condition by the warrantee, he held that the effect of the Acts of 1794, 1802, and 1804, which have already been cited herein, rendered the new warrant unnecessary; and that the settler could lawfully enter, if the warrantee had failed to perform the condition of actual settlement within the two years after the ratification of Wayne's Treaty with the Indians. This decision took place in 1832, and, as a consequence, the warrant titles being imperilled by it, a great disturbance arose. This eventuated in new suits, and in the passage of the Act of April 3, 1833 (already cited). Two cases came into the Supreme Court in October, 1835, *Barnes vs. Irvine*, and *Smith vs. Collins*. The former was argued by able counsel, McCalmont and Thompson on one side and Banks and Pearson on the other. The opinion was delivered by Chief Justice Gibson, in October, 1836, in which he begins by stating the error under which he and Justice Rogers were led to acquiesce in the decision in *Campbell vs. Galbraith*—*viz.*; the omission of the last clause of the fourth section of the Act of April 2, 1802 (in the *Purdon Digest*, published in 1830). The doctrine of *Campbell vs. Galbraith* was reversed, and the court again stood upon the broad ground that the warrantee was excused by the prevention of the Indian war from making his settlement, until the end of two years after the ratification of Wayne's Treaty, and that the settler could not enter for the forfeiture, even after the two years had expired, without obtaining a vacating warrant.

On the argument of the case in 1835, the judges, excepting Judge Sergeant, who came upon the bench after the decision in the case of *Campbell vs. Galbraith*, were equally divided in opinion. At his request the case was held over for his examination, he not being familiar with western land titles. In the meantime he read up, and

this led to the making of his Treatise on the Land Laws of Pennsylvania. After the discovery of the omission by Mr. Purdon of the proviso to the fourth section of the Act of 1802, Kennedy and Huston, seemed not to have insisted on their interpretation of the Acts of 1794, 1802, and 1804. The breadth of the opinion in *Barnes vs. Irvine* was, however, not so important, as the Act of 1833 had dispensed with the condition of settlement on part of the warrantee. In this long controversy it is manifest the legislative mind turned toward the settlers, while the judicial mind stood on the other side, until the Legislature ended the contest by the Act of 1833.

This termination against the settlers of the controversy upon the ninth section of the Act of April 3, 1792, as to the necessity of obtaining a vacating warrant, did not, however, quiet titles. There remained



(Courtesy of the Mercer County Dispatch and Republican)

Humes Hotel, Mercer

Destroyed by Fire, 1916. Lafayette was a Guest Here in 1824

another contest, continuing for years, arising out of the application of the Statute of Limitations to the possession of the actual settlers. For a long time the Supreme Court stood firmly on the side of the warrantees, but gradually this strictness gave way; and finally, under the influence of an infusion of new blood upon that bench, the rights of the settlers were broadened and ripened into a possession that quieted the title in many remaining cases, which had not been settled at law, or by compromise.

The early doctrine was, that a settler, who enters on land which had been warranted and surveyed, or had been patented to another, being a trespasser, acquired no right under the Statute of Limitations, beyond the land actually cultivated or inclosed for twenty-one years. This was termed his *pedis possessio*, or actual possession. All the woodland, outside, was deemed at law to be in the possession of the

warrantee or patentee by reason of his title. This was the *presumptive* possession of the owner of the warrant or patent. Consequently, as the land first cleared, and fenced or cultivated was small in the beginning of the twenty-one years, the statute, as thus interpreted, protected the settler to the extent only of his original improvement, which was often only a very few acres—perhaps only three or four out of a four hundred-acre tract. In other words, the title by limitation was confined to the few acres only held by a *pedis possessio* in the beginning, and could not be constructively extended to the unimproved land. The case of *Miller vs. Shaw*, decided in 1821, seemed to settle this doctrine by saying, it is a well established principle that there can be no construction in favor of a wrongdoer.

After this came the case of *Royer vs. Benloe*, in 1823. It was argued elaborately; but the Supreme Court held it plainly came within the principle of *Miller vs. Shaw*. The court below had held that a clearing and cultivation of the land, within the defined limits of the occupant, in two parcels half a mile distant from each other, and a use of the woodland by cutting when and where it suited his convenience, protected every part of the land so designated. This was decided to be error, and the judgment below was reversed. Chief Justice Tilghman repeated the principle stated in *Miller vs. Shaw*, in these words: "He who enters without title is a trespasser, and has no constructive possession, but is limited to the spot actually occupied." Yet the Chief Justice, in a few words of exception, where the owner confesses himself to be out of possession, gave rise to a doctrine of a *presumptive ouster*, which afterwards became the foundation of a great change in the doctrine of possession under the statute. One of the examples given by the Chief Justice was where an owner permits the settler to pay the whole of the taxes on the land for twenty-one years, without objection on his part.

The case of *McCall vs. Neely*, in 1834, gave occasion for the application of this exception; and what is remarkable, in an opinion by Chief Justice Gibson, who before and afterwards, gave strong utterance to the old doctrine. In the beginning of the opinion he gave the fresh idea logic and strength. However, the court had increased from three to five judges, at least two of whom had been reared in a different school. The plaintiff was a patentee, and the defendant a settler on the whole tract, who continued in possession for twenty-one years, paying the taxes on the whole land. The Chief Justice, after announcing the former doctrine in clear terms, then turned to the doctrine of disseizen at common law, and discussing it awhile with not very deci-

sive result, said: "The principle I have thus attempted to enforce may seem inconsistent with the doctrine of *Miller vs. Shaw*; but it is to be observed that the Court had in view the case of an intruder claiming no more than the rights of a settler, which it has been shown give no possession of anything but the land immediately occupied; and this much it is proper to say, in order to restrain the generality of expressions used, more particularly by myself." "And, indeed," says Judge Agnew, "this apology seemed to be necessary, for in a few moments he started afresh thus: 'But may not one who entered originally as a settler or squatter change the character of his disseizin by exercising acts of ownership under the title of the disseizee, and thus become a disseizor by color of title?'" He then refers to the dictum of Chief Justice Tilghman in the case of *Royer vs. Benloe*, repeated by Justice Rogers in the case of *Read vs. Goodyear*, that payment of taxes raises a presumption of ouster of the whole tract; and of acquiescence of the owner as an acknowledgment of ouster. Yet the same reasoning had been used before in many cases without effect. Indeed, the payment of taxes by the settler for the whole tract was a necessary incident of the law itself, which subjected the tenant in possession to the payment of all the taxes. And makes the reasoning in *McCall vs. Neely* more remarkable in, that at the same term, September, 1834, in the case of *Sweeny vs. McCullough* the doctrine of *Miller and Shaw*, and *Royer and Benloe*, was reasserted by Justice Rogers with renewed tenacity. He even says, that after these two solemn decisions the question should be at rest. Yet to those who understood these settlement cases the only difference between the cases of *McCall vs. Neely* and *Sweeny vs. McCullough* is the proof of the payment of the taxes in the former, while the presumption of the payment of them arises in the latter quite as conclusively by operation of law, from continued possession, and the legal mode of assessment and taxation. However, this distinction threw the first ray of light upon the titles of these benighted settlers, and counsel soon began to improve it.

The next attempt to hold title by limitation to the whole of the tract arose in the case of *Ross vs. Barker*. There was no proof of an early definition of boundary by the settler, or proof of the actual payment of taxes by him, and the court confined the operation of the statute to eight acres held by *pedis possessio* for twenty-one years. This was a very noted case, the claim of the settler being to four hundred acres, embracing parts of the two warrants of Daniel Broadhead, heretofore referred to, as issued on April 3, 1792, for land opposite to the great falls of Big Beaver Creek; the same land on

which the town of Beaver Falls, in part, stands. But the opinion of Chief Justice Gibson gave another ray of hope in the effect he seemed to attribute to an *official* survey by a settler under the Act of 1792. This intimation was taken hold of by Judge Agnew in the case of *Lawrence vs. Hunter*, and resulted in the reversal of the judgment of the court below, and establishment of the doctrine that an *official survey* for a settler under the Act of 1792, gave a color of title to the land within the survey, and thereby title to the whole survey under the Statute of Limitations.

In the meantime, however, *Lawrence vs. Hunter* had received an accession of strength from the reannouncement of the doctrine of *McCall vs. Neely*, in the case of *Criswell vs. Altemus*, on the east side of the Allegheny River. The doctrine repeated in it can best be stated in the language of Judge Kennedy, who delivered the opinion. After referring to some of the cases we have noticed, he says: "Though I cannot recur to any case where the question has been raised directly and adjudicated by this Court in the affirmative; nor am I certain that any such has occurred; yet such has been the settled opinion in it for some time back, that where an intruder enters without color of title into, and settles with his family upon, an unseated tract of land belonging to another—who claims it under warrant and survey, either with or without a patent from the Commonwealth—and having settled upon, claims it as his own, by exercising acts of ownership over it, from year to year, in putting up buildings upon it, clearing and fencing more or less of it, and using the whole of it according to the custom of the country—that is, the clear land as arable, or meadow, or pasture, and the woodland for obtaining from it timber as often as the settler shall have occasion for it to answer his purpose—also, returning the whole of it to the assessors as his own, and paying taxes thereon, when assessed, for a period of twenty-one years, will be sufficient, under the operation of the Statute of Limitations, to protect him in possession of the whole of the tract or survey, including the woodland as well as the improved parts of it."

It would appear unnecessary to pursue the subject of title by limitation further. *Criswell vs. Altemus*, and *Lawrence vs. Hunter* became the foundation of other cases in which the rights of the settlers were supported after an adverse possession of twenty-one years. Many cases arose in later years, and many interesting discussions took place, such as occurred in the case of *Hole vs. Rittenhouse*, wherein the contest between Chief Justice Black and his colleague, Justice

Lewis, took a form which made the discussion State-wide in its interest.

We have sketched rather fully the history of the lands in the northwestern part of the State acquired under the Indian purchases of 1784, 1785, and 1789, at Fort Stanwix, Fort McIntosh and Fort Harmar, and the history of the great questions which arose under the legislation applicable to these lands. The history of the persistent efforts of the State to bring about the settlement and improvement of these lands in accordance with its wise and farseeing as well as benevolent plans, and the contests between the warrantees and the settlers, resulting from that inherent human desire of self interest, which has so often resulted in the advantage of the strong and influential, and the hindrance of the weak and humble.

Despite the many difficulties encountered, or possibly, as the result of these same difficulties, since often seemingly insurmountable difficulties inspire that dynamic force which impels man to persevere in the determination to accomplish his objectives, this region has contributed much to the State and the Nation and has been outstanding in the number of its citizens whose services in the many fields of human endeavor have won for them distinction, and which have contributed much to the progress of the greatest State in the world's greatest Nation.

CHAPTER IV

Life of Early Settlers

As has been stated in another chapter, the early development of this region was greatly interfered with by persistent Indian incursions. The settlement of a new country in the immediate neighborhood of an old one is not attended with much difficulty, because supplies can be readily obtained from the latter; but the settlement of a country very remote from any cultivated region is a very different thing, because at the outset, food, raiment, and the implements of husbandry are obtained only in small supplies and with great difficulty. The task of making new establishments in a remote wilderness, in time of profound peace, is sufficiently difficult; but when in addition to all the unavoidable hardships attendant on this business, those resulting from an extensive and furious warfare with savages are superadded, toil, privations and sufferings are then carried to the full extent of the capacity of men to endure them.

Such was the wretched condition of our forefathers in making their settlements here. To all their difficulties and privations the Indian was a weighty addition. This destructive warfare they were compelled to sustain almost single-handed, because of the lack of easy communication between the West and East, and no aid was sent for lack of knowledge of the state of affairs. But perhaps these conditions which were so difficult to endure and overcome had much to do with the building of the sturdy and resolute character developed by our pioneers and which has been a great influence in the making of the many and valuable contributions of this region to our civilization. To quote a former writer:

“The poverty, the labors and the sufferings of our forefathers form a striking contrast with the easy comforts and luxuries now enjoyed by their children, and to which they have become so thoroughly accustomed that it seems almost impossible that they should exist without them.”

The early settlers lived in log cabins which they built themselves. Trees of uniform size, as nearly as possible, were selected, cut into pieces of the desired length, and carried or hauled to the site of the proposed building. There was, at each corner, an expert hand with an axe to saddle and notch the log. The saddling was done by so hewing the end of the log as to give the upper half the shape of the roof of a building. A notch was then cut into the next log to fit the saddle, and of such depth as to bring the logs together. The usual height was one story. The gable was laid up with logs gradually shortened up to the top or peak, giving the shape or pitch of the roof. On the logs which formed these gables were laid stout poles reaching from one gable to the other, at suitable distances to hold the covering, which consisted of bark peeled from the elm or basswood trees. The strips of bark were about four feet long, and about two or three feet wide, and laid in tiers, each lapping on the preceding one, after the manner of shingling. The bark was kept down by a heavy pole laid across each tier, and fastened at the ends. Sometimes, instead of bark, a kind of shingle was used, split from straight-rifted trees, and resembling undressed staves of flour or liquor barrels. These were by some called *shakes*. These were laid about two feet to the weather. They were then fastened down by heavy poles called weight poles, as in the case of bark roofs.

At one end of the building, a space about eight feet in length and five or six feet in height was cut out, and the space filled by a stone wall, laid in clay or mortar, for a fireplace. The chimney, resting on props made in various ways, was commenced at a proper height above the hearth, very wide, to correspond with the broad fireplace beneath it. It was built with split sticks of timber, resembling a common strip lath, but being much larger. They were laid up in the manner of a cob-house, the chimney being gradually narrowed upward to the top, where its size was about the same as was that of any ordinary brick chimney of a frame house of later years. The inside was plastered with clay or mud and chopped straw, the latter answering the same purpose as hair used in the mortar in plastering the inside walls of the house. This "stick chimney," or "stick and clay chimney," was far from being fireproof. Fire would sometimes be communicated to the sticks from soot and alarm the family. A speedy application of water thrown up plentifully inside soon allayed all fear.

A doorway was cut through one side of the house, and split pieces for door posts, sometimes called "door cheeks," were pinned to the

ends of the logs with wooden pins. For the want of boards to make doors, a blanket was used to close the door entrance until boards could be obtained. The hinges and the latch were both made of wood. The latch was raised from the outside by a string passing through the door and fastened to the latch inside. The safety of the family during the night was effected by drawing in the latch string. Floors were made of split slabs, hewed on one side, and were sometimes called *puncheons*. For a window, a hole was cut in the wall large enough to admit a sash of four or six panes of seven by nine glass. When glass could not be had, the hole was sometimes closed



Old Flake Corner, Southeast Intersection of East Market
and South Pitt, Mercer

with greased paper pasted over it. The interstices or cracks between the logs were filled with mud or clay. The large cracks or chinks were partly closed with split pieces of wood before the mortar was applied. Immigrants, as a rule, brought no bedsteads. A substitute was made by boring holes in the walls, in the corner of the house, into which the ends of poles were fitted. Three corners of the bedstead being thus fastened to the walls, it required but a single post. It now wanted only a cord, which was sometimes made of elm or basswood bark.

A view of the internal arrangements of one of these primitive dwellings would be interesting to those unacquainted with pioneer life. On entering, were it at meal time, the smaller children would be seen standing or sitting around a large chest in which some of

the more valuable articles had been brought, and which then served as a table; the parents and older children sitting at a table, made perhaps of a wide puncheon plank, partaking of their plain meal, cooked by a log-heap fire. In one corner of the room would be seen one or two small shelves on wooden pins, displaying the table ware, when not in use, consisting of a few tea cups and saucers, a few blue-edged plates, with a goodly number of pewter plates, perhaps standing single, on their edges, leaning against the wall to render the display of the table furniture more conspicuous. Underneath the cupboard would be seen a few pots, a spider, and perhaps a bake-kettle. Not a sufficient number of chairs—perhaps none—having been brought, the deficiency had been supplied with three-legged stools made of puncheon boards. Over the doorway would be found the indispensable rifle on two wooden hooks nailed to a log of the cabin. On the walls would be hung divers garments of female attire made of cotton and woolen fabric, some of which had done long service before removal hither.

Log cabins were lighted in the night in different ways. In the absence of candles and lamps light was, through the winter season, emitted from the fireplace, where huge logs were kept burning. A kind of substitute for candles was sometimes prepared by taking a wooden rod ten or twelve inches in length, wrapping around it a strip of cotton or linen cloth, and covering it with tallow pressed on with the hand. These "sluts," as they were sometimes called, afforded light for several nights. Lamps were prepared by dividing a large turnip in the middle, scraping out the inside quite down to the rind, and then inserting a stick about three inches in length in the center so as to stand upright. A strip of linen or cotton cloth was then wrapped around it, and melted lard, or deer's tallow, was poured in till the turnip rind was full, when the lamp was full (lamps of this kind were only occasionally used); more often a dish of refuse grease was used, a rag being inserted and the latter being set on fire, and fed with the melted fat, would afford a sort of dismal light, and a yet more disagreeable odor. By the light of these, and other rudely constructed lamps, the women spun and sewed, and men read when books could be obtained, or worked at some implement for household or field use. When neither lard nor tallow was on hand the large, blazing fire supplied the needed light. By these great fireplaces many skeins of thread have been spun, many a yard of linen woven and many a frock and pantaloons made.

Living in houses like those described was attended with serious discomforts. A single room served the purposes of kitchen, dining room, sitting room, bedroom and parlor. In many families were six, eight or ten children, who were, with their parents, crowded into one room. In one corner was the father's and mother's bed, and under it the trundle bed for the smaller children. The larger ones lodged in the chamber which they entered by a ladder in another corner, and sometimes made tracks to and from their beds in the snow driven through the crevices by the wind. Nor did the roofs, made of bark or "shakes," protect them from rain in the summer. How visitors, who came to spend the night, were disposed of, the reader may not easily conceive. Some, as their families increased, added to their houses an additional room of the same size and manner of construction as the former. Such were some of the dwellings and conditions of many of the pioneers of this portion of the State. Many were in a condition which, for comfort and appearance, were far beneath that described in the foregoing. Imagine the state of those who, on foot and with packs on their backs, forced their way through the wilderness and tried to improve a piece of land.

The lands in this section were covered with a dense and heavy forest. To clear the soil of its timber required an amount of hard labor of which many of its present occupants have no adequate conception. Many now living on the hard-earned fortunes of their pioneer fathers and grandfathers could not be induced to enter upon a similar course of labor.

The early axes were rude and clumsy affairs, of twice and thrice the size and double to quadruple the weight of those in use now. The first improved were called Yankee axes by the early woodsmen, and were introduced into this country in 1819. In about ten years after the introduction of the improved axes, the double-bitted came into use.

The first part of the clearing process was "underbrushing." The bushes and smallest saplings were cut down near the ground and piled in heaps. The trees were then felled, their bodies cut into lengths of twelve to fifteen feet, and the brush and small limbs of the trees thrown into heaps. After the brush had become thoroughly dry they were burned. As a "good burn" was desirable, a dry time was chosen. The old leaves being dry and covering the ground, the whole field would be burned over, and an abundant crop assured. The next part of the process was "logging," or log-rolling. This required the associated labor of a number of men, who would, in turn, assist each other. The neighbors, on invitation, would attend with their handspikes. These

were strong poles, about six feet in length, and flattened at the larger end, in order to their being more easily forced under or between the logs. Logs too heavy to be carried were drawn to the pile by a team, generally oxen, and rolled up on the pile with skids, one end lying on the ground and the other on the heap. The heaps were then burned and the soil was ready for seed. Most of the logging was done by "bees." A number of the neighbors would come with their teams, attended by a sufficient number of extra hands; and a whole field of several acres would be logged in an afternoon. At these logging-bees, as at house and barn raisings, was generally a two-gallon bottle, perhaps two, filled with whiskey. Most of the men were moderate drinkers; some, however, gave indication, by their many witty sayings, that they had overstepped the bounds of moderation. But there were also, thus early, a few temperance men, whose incredulity as to the magic power of strong drink, as an assistant to manual labor, had caused them to abandon its use.

The wild animals inhabiting this region at the time of the first settlers were the deer, bear, wolf, wildcat, panther or painter, fox, otter, porcupine or hedgehog, raccoon, woodchuck or groundhog, mink, skunk, muskrat, opossum, rabbit, weasel and squirrel. None were much feared but the bear and wolf. The former was the most dangerous; the latter most destructive to property. The bear is generally ready to attack a person; the wolf seldom does so unless impelled by hunger, or in self-defense. For many years it was difficult to protect sheep from the ravages of the wolves. They had to be penned every night. Many were destroyed in the day time, near the house. It is the nature of the wolf to seize a sheep by the throat and suck its blood, and leave the carcass as food for other carnivorous animals; provided the number of sheep is sufficient thus to satisfy the hunger of their destroyers. Pigs and calves were also sometimes victims to these pests of the early settlers. Persons were followed by them to the doors of their dwellings, and the sleep of families was often disturbed by their howlings. "The noise made by these animals," as it has been described by some of the old settlers, "was not, as some imagine, a coarse bass growl, but a strong, crakely tenor. Seemingly a leader began the concert by a solo of a firm prolonged sound, when the rest would pitch in with a grand chorus of the most terrible jargon of sounds, dying away at the place of beginning, as the reverberation sounded over the far off hills." To effect the destruction of these animals, bounties for their scalps were offered by the public authorities, and these induced hunters and trappers to devote much time to the destruction of wolves.

As wolves hunt in the night, when they cannot be shot, most of them were probably caught in traps, of which there were several kinds. One was a pen built of small logs or heavy poles, six or seven feet high and narrowed upward. Into this pen a bait was thrown. A wolf could easily enter it at the top, but was unable to get out. Another was the steel trap with jaws a foot or more in length. The clamps were notched like a cross-cut saw. It resembled, in form, a common spring rat trap. Attached to it was a chain with hooks, not to fasten it, but to make it difficult for the wolf to drag it. Caught, as he probably would be by a foreleg, while trying to paw out the bait, if the trap were made fast, he would gnaw off his leg and be gone. There were other traps, but descriptions of these will not be attempted.

All the settled portion of this region of the State suffered severely from the depredations of wolves. The deep recesses of the ravines formed for them secure retreats where, during the day time, they could quietly digest the mutton of the night before. A century ago or more wolf hunts were common. The people became exasperated at the loss of their stock, and formed parties to exterminate the animals. A certain section of country, containing ravines, was decided upon, and a simultaneous attack was made upon all sides. These attacks were well planned and well executed, under almost military discipline, and brought good results, so that after a few years it was only occasionally that wolves were troublesome, as they generally left for more secure quarters. Many stories are told of exciting experiences with bears.

Of the many instances of men coming in contact with bears, wolves, and other ravenous beasts, it is believed there is not one in which a man was killed, although there were some who had close calls.

While the forest was infested with noxious animals, it was of no small value as a hunting ground and today the region is one of the Nation's popular resorts for the hunter. Deer hunting in the winter was a common activity, as it is today. Much of the meat was sometimes lost. The hunter, if alone and far from home, would shoulder the more valuable part—hams and skin—and leave the rest for the wolves; or he would hang it to a sapling or a large limb of a tree, which had been bent down for the purpose, and which, springing back, would raise the meat beyond the reach of wolves. Having delivered his first load at the cabin, he would return, conducted by his tracks in the snow, and bring home the remainder. The opossum, raccoon, the rabbit and the squirrel were also a part of the pioneer's fare. To

the variety of meats enumerated may be added several of the feathered tribes, as pigeons, ducks, wild turkeys, partridges and several others. The present site of Grove Hill Cemetery, Oil City, Venango County, was in early days the favorite roosting place for thousands of wild turkeys and other birds. As such it was well known to Cornplanter and his Senecas. In a brief period game as a steady diet made way for pork and poultry. Beef was only occasionally used, cattle were too valuable to use for food. The common fowl furnished meat and eggs, geese were chiefly raised for the feathers, with which old beds were replenished and new ones filled. Many still repose on beds made by their grandmothers or great-grandmothers in the long ago.

Agriculture is a term hardly applicable to pioneer farming. The implements used would, in this age of improvement, attract attention as great curiosities. The virgin soil, as has been observed, was ready for the seed when cleared of its timber. The principal instrument of tillage for several years was the triangular harrow, usually called *drag*. This consisted of pieces of timber (hewed before there were mills for sawing), about five inches square and six feet long, put together in the form of a letter A. The drag was sometimes made of a crotched tree, and needed no framing. The teeth, made of wood, were double and even treble the size of those later in use, in order to stand the severe trial they were to undergo. The drag bounded along over stubs and roots and stones, up and down the hill-sides, drawn generally by oxen and often driven by boys.

When the roots had become sufficiently brittle to admit of the use of the plow, an instrument was used. When the first "Yankee improved plow" was brought into the region, one man said: "the critter is too darned small. It'll go to pieces, sure." Another said: "Give me a plow with a twelve-foot beam and a seven-foot handle and I can handle it." The old plow was something resembling the later ones inasmuch as it was used for the same purpose. At first it was made entirely of wood; then an iron point was added; then an iron shoe, coulter, etc., and gradually it was improved until the advent of the Yankee cast-iron plow superseded it.

In harvesting, the change was not less striking. Before the decay and removal of stumps permitted the use of the grain cradle, wheat was cut with the sickle, now a rather rare instrument. It was then a staple article of merchandise. In the old day books and journals of the early merchants could be found under the names of scores of customers the charge, "To 1 sickle," followed in many instances by that

other charge, "To 1 gallon whiskey," an article deemed by many as necessary in the harvesting operation as the instrument itself. The cradle, which superseded the sickle, later gave way to the reaper, an instrument then no more likely to be invented, as one writer has said, "than the photographic art, or means of hourly intercourse with the inhabitants of the opposite side of the globe." Imagine a farmer today attempting to reap a wheat field of forty or fifty acres with a



Bradford, Looking Up Main Street

sickle, and then think of those western fields comprising hundreds of acres.

For several years there were neither wagons nor roads on which to use them. A more simple vehicle was used. From a small tree was taken a piece having at one end two prongs, the single end was put into the ring of the ox-yoke, the other resting on the ground. Across the prongs puncheon boards were laid and kept from sliding backwards by long wooden pins set perpendicularly in each prong. Sometimes the oxen or horses were attached to the fore end of a log

trough, the bottom of which had been flattened, and the end hewed away from the under side to fit it, like a sled runner, for sliding over the rough ground. Some of the early settlers came into the region on "sled-cars," and used them for transportation purposes for several years. A sled-car consisted of two poles, one on either side of the horse, one end of each being fastened to the hames and the other resting on the ground. On the parts resting on the ground, puncheon boards were laid, and were prevented from sliding backwards by long wooden pins fixed perpendicularly in each pole. The first wagon constructed in Venango County, it has been claimed, was built in 1820 by Ninian Irwin for Thomas McKee. When the first wagon was introduced into the region it is impossible to state, but it was probably between 1815 and 1820. The pioneer's first harness was made of withes with crooked roots or pieces of limbs of trees for hames. It was not long before the tanning of hides was commenced, and then good, substantial homemade leather harness was used.

Grain was generally threshed with a flail, a day's work amounting to ten to twenty bushels a day. There were no fanning mills in the early times. Sometimes the grain was spread in shallow depths on the floor, where it was threshed, or placed in a box perforated with holes, or in a riddle (a very coarse sieve), about thirty inches in diameter and five to six inches deep. To "raise the wind" a linen sheet, possibly taken from the bed, was held at the corners by two men, who gave it a semi-rotary motion or sudden swing. A man would shovel or stir up the wheat on the floor, or hold up and shake the box or riddle with its contents, and the wind caused by the motion of the sheet would blow away the chaff. In this way about ten bushels could be cleaned in half a day. The introduction of fanning mills was of great service, and they soon came into general use.

The grass was first cut with a sickle, but only for a short period, as scythes were brought in by immigrants, and the hay harvest became a matter of considerable importance. The husking of corn was generally done in the field, as was the custom later. In some parts of the region the ears, when fully ripe, were broken from the stalk, thrown into heaps, and then hauled into the barn, and thrown into a long heap across the barn floor, ready for a *corn-husking*, in which the neighbors, old and young, were invited to participate on some evening. The anticipation of a good time secured a general attendance. A good supper, which several of the neighboring women had assisted in preparing, was served at eight or nine o'clock. The old folks would then leave, and in due time the boys would escort the girls to

their homes. The recreation afforded to the young people on the yearly recurrence of these festive occasions was as enjoyable and much more sensible than much of that indulged in today.

The several processes of cooking in pioneer times would amuse those who have always known the cook stove. The usual wide fire-place has already been described. Kettles were hung over the fire to a stout pole, sometimes called *lug pole*, the ends of which were fastened into the sides of the chimney at such height as not to be likely to ignite from the heat or sparks. The kettles were suspended on *trammels*, which were pieces of iron rods with a hook on each end. The uppermost one reached nearly down to the fire, and with one or more shorter ones, the kettle was brought to the proper height above the fire. For the want of iron, wooden hooks were sometimes used for trammels. Being directly above the kettles, they were safe from fire.

The long handled frying pan became a common cooking utensil. It was held over the fire by hand; or, to save time, the handle was laid on a box or back of a chair, the pan resting on the fire, while the cook was otherwise engaged. The pan was also used for baking short cakes. It was placed in a nearly perpendicular position before the fire, leaning slightly backward, with coals under or back of it to bake the under side. A more convenient article was the cast iron, three-legged, short handled spider which was set over coals on the hearth for frying meat. Its legs were of such length and so adjusted that, when used for baking cakes or bread, being turned up towards the fire, to the proper slope, handle upwards, it would keep its position.

An early mode of baking corn bread, cast iron ware being scarce, was to put the dough on a smooth board, about two feet long and eight inches wide, placed on the hearth in a slanting position before the fire; when the upper side was baked, the bread was turned over for baking the other side. When lard was plenty, the bread was shortened, and called johnny-cake. But a better article for baking bread than either the pan or spider was the cast iron bake-kettle, in some places called "Dutch oven," with legs and a closely fitted cover. Standing on the hearth with coals under and over it, bread and biscuit were nicely baked. Bread for large families was, in after years, usually baked in large outdoor ovens built of brick or fireproof stone. Turkeys and spare ribs were roasted before the fire, suspended by a string, a dish or pan being placed underneath to catch the drippings. Some of the inconveniences of cooking in these open fire-

places will be readily imagined. Women's hair was singed, their hands were blistered and their dresses scorched. But framed houses with jamb fireplaces measurably relieved the pioneer housewives. In one of the jambs was fixed an iron crane, which could be drawn forward when kettles were to be put on or taken off. The invention of the cooking stove commenced a new era in cookery; and none most averse to innovation would desire to return to the primitive methods.

Among the many hardships of pioneer life, not the least was the difficulty in procuring bread. For at least two years the settler in the woods must obtain his family supplies chiefly from other sources than his own land. This difficulty is enhanced by the remoteness of his residence from the older settlements, where his supplies are to be obtained. Hence, those who settled in this region within the first few years had a more severe experience than those who came after a surplus of grain was produced and mills for grinding it were erected at accessible points.

Rev. S. J. M. Eaton, D. D., of Franklin, speaking about sixty-five years ago, said:

"The people who settled this country when it was a wilderness are worthy of all honor and kind remembrance. A late writer has said: 'A more intelligent, virtuous and resolute class of men never settled any country than the first settlers of western Pennsylvania; and the women who shared their sacrifices were no less worthy.' They came here, many of them, in poverty. They found little but hardships for very many years. They found the land covered with timber. There were for many years neither mills or factories. With their own strong arms they must cut down the forest and fence the fields and build log cabins. Some of the first settlers lived on potatoes chiefly the first year of their coming.

"An old veteran, out to the west of us, who came here about the beginning of the century, thus relates his experience: 'Me and the woman came out on foot, driving one little cow, and carrying all our effects on our backs. The first year we eat potatoes and slept on good clean leaves gathered up in the woods. The first wheat I raised, I took a bushel on my back, walked to Pittsburgh, got it ground and carried back the flour.'"

And this was no uncommon experience. Sometimes they pounded their corn in mortars cut out of stumps.

Upon fish and game the pioneers relied for subsistence until they could raise vegetables and grain. Whole families for many weeks, even months, tasted not a particle of bread, subsisting upon game and other products of the forest. "Ramps" or leeks, with which the woods abounded, furnished to some extent food for man and beast. The leaves, which were in some regions far advanced before the disappearance of the winter snows, furnished for cattle a valuable pasture ground; and the bulbs later in the season were, in time of scarcity, used by settlers as a substitute for common articles of food. Families, too, lived for weeks on hulled wheat and on meal from corn pounded out at home. For this purpose one end of a large block was scooped out, making a cavity holding half a bushel or less of corn. A spring pole was fixed over the rafters, or to something else of proper height. On the end of the pole a wooden pestle was suspended by a rope. It will be readily imagined that the principal use of the pole was to assist in raising the pestle; and that a small quantity of grain was pounded at a time. The pestle was not in all cases hung to a pole, but was sometimes used wholly by the hand of the operator. A corn cracker or hominy block was attached to some of the first sawmills and to these the settlers would resort for many miles, and wait sometimes two days, in order to get a chance at the hominy mill.

Nearly all the clothing of the early settlers was made from cloth of home manufacture. Long after the region had passed its pioneer state, the women carded, spun, wove, colored and fulled the fabric, and when this was done they made the clothing, without the aid of tailors or fashion plates. When more spinning was to be done than the wife could do in addition to her ordinary house work, or where the daughters were too young to help, spinsters were employed to come into families to spin flax in the winter season, and wool in the summer. The price usually paid these itinerant spinsters was a shilling a day, the day's work ending at early bed time. Some will be surprised to learn that many of these women had money to show at the year's end. It was the custom, to some extent, to count a certain number of "runs" as a day's work. This had a tendency to accelerate the motion of the wheel and lessen the hours of labor. The spinning exercise is one which the young women of later years have never enjoyed. The wheel used for spinning flax was called the "little wheel" to distinguish it from the "big wheel" used for spinning wool. These "stringed instruments" furnished the principal music of the family, and were operated by our grandmothers with great skill,

attained without expense, and by far less practice, than is necessary for our modern dames to acquire a skillful use of their elegant and costly instruments. They were indispensable household articles, and were to be found in nearly every family. The loom was not less necessary than the wheel. There were some houses, however, in which there was none. But there were always some who, besides doing their own weaving, did some for others. Woolen cloth was made in families. There being at first no carding machines, wool was carded and made into short rolls with hand cards. These rolls were spun on the "big wheel," which many years later was to be seen in the houses of some of the old families, being occasionally used for spinning and twisting cotton yarn. It was turned with one hand, and with such velocity as to give it sufficient momentum to enable the nimble mother, by her backward step, to draw out and twist a thread of nearly the length of the cabin. The same loom was used for both linen and woolen. A cloth was sometimes made called *linsey*, or *linsey-woolsey*, the warp being linen and the filling woolen. The *linsey* petticoat and bed gown, which were the universal dress of our women in early times, would make a singular figure in our days.

In 1795, James Adams, a cloth dresser by trade, came to the mouth of Mill Creek, near the present site of Utica, Venango County. Woolen for men's outer garments was then generally sent to him by the settlers in that county to be fulled and dressed, if they lived within a convenient distance. He in a short time (date not known, but prior to 1800), built a small woolen mill and carding machine, to which he subsequently added a gristmill and sawmill. All these were in operation prior to 1800. Much dyeing was done in the family; butternuts were used to make brown, peach leaves for yellow, and myrtle for a red shade.

Woolen flannel was also made and worn by the mothers and daughters. Flannel for women's wear, after dyestuffs were to be had, were dyed such colors as the wearer fancied. It was sometimes a plaid made of yarn of various colors, home-dyed. To improve their appearance these flannels were sent to a cloth-dresser (after such a mechanic had come into the country) for a slight dressing. Dye goods and dyestuffs formed no small part of the early merchant's stock. Barrels of chipped Nicaragua logwood and other woods, kegs of madder, alum, copperas, vitriol, indigo, etc., formed a large part of the teamster's loading for the storekeeper. The old dye-tub was to be seen standing in the chimney corner covered with a board, and used as a seat for children when the stools or homemade chairs were wanted for visitors.

Nearly all the coats, "warmuses," pants, etc., were made of home-spun goods. When a young man appeared in a suit of "boughten cloth" he was an object of envy to his associates. For many years few, except merchants, lawyers, doctors and some village mechanics, wore cloth that had not passed through the hands of the country cloth-dresser. Hence, the early merchant kept small stocks of broadcloths.

There were also itinerant tailoresses who came into families to make up men's and boys' winter clothing. The cutting was done by the village tailor, if a village was near. "Bad fits," which were not



Air View of Oil City

uncommon, were generally charged to the cutter. Hence the custom of tailors, when advertising, "cutting done on short notice, and warranted to fit," to append the very prudent proviso, "if properly made up." These seamstresses charged for their work two shillings per day. This was thought by some a little exorbitant, as the usual price of help at house work was six shillings a week, Sundays not excepted.

The coats and bed-gowns of the women, as well as the hunting shirts of the men, were hung in full display on wooden pegs around the walls of their cabins, so that while they answered in some degree the place of paper hangings or tapestry, they announced to the stranger as well as neighbor the wealth or poverty of the family in the articles

of clothing. This practice was not wholly laid aside for many years amongst the backwoods families.

The historian might say to the ladies of the present time: "Our ancestors of your sex knew nothing of the various articles and the devices with which their grand-daughters now decorate themselves." Such things were not then to be had. Many of the younger part of them were quite well grown up before they ever saw the inside of a store room, or even knew that there was such a thing in the world, unless by hearsay. Instead of the toilette they had to handle the distaff or shuttle, the sickle or weeding hoe, contented if they could obtain their linsey clothing, and cover their heads with a sunbonnet, made of six or seven hundred linen.

On the frontiers, and particularly among those who were much in the habit of hunting, and going on scouts and campaigns, the dress of the men was partly Indian, and partly that of civilized nations.

The hunting shirt was universally worn. This was a kind of loose frock reaching half way down the thighs, with large sleeves, open before, and so wide as to lap over a foot or more when belted. The cape was large, and sometimes handsomely fringed with a ravelled piece of cloth of a different color from that of the hunting shirt itself. The bosom of this dress served as a wallet to hold a chunk of bread, cakes, jerk, tow for wiping the barrel of the rifle, or any other necessary for the hunter or warrior. The belt, which was always tied behind, answered several purposes besides that of holding the dress together. In cold weather the mittens, and sometimes the bullet-bag, occupied the front part of it. To the right side was suspended the tomahawk, and to the left the scalping knife in its leathern sheath. The hunting shirts were generally made of linsey, sometimes of coarse linen, and a few of dressed deer skins. These last were very cold and uncomfortable in wet weather. The shirt and jacket were of the common fashion. A pair of drawers, or breeches, and leggins were the dress of the thighs and legs; a pair of moccasins answered for the feet much better than shoes. These were made of dressed deer skin. They were mostly made of a single piece, with a gathering seam along the top of the foot, and another from the bottom of the heel without gather, as high as the ankle joint, or a little higher. Flaps were left on each side to reach some distance up the leg. These were nicely adapted to the ankles and lower part of the leg by thongs of deer skin, so that no dust, gravel or snow could get within the moccasin.

For a while the pioneers wore the moccasins, and then boots and shoes were made of tanned leather. Farmers subsequently got the hides of their slaughtered cattle tanned "on shares"; or, if their share was judged insufficient to shoe a whole family, for the tanning and dressing, other means of payment were provided. In the early part of the nineteenth century, Andrew Bowman commenced, on Sugar Creek, Venango County, tanning for himself and neighbors by laying down his hides in troughs cut from chestnut trees. He is the first tanner of whom we have any record, and his career must have commenced about 1806. Then there were circulating shoemakers, who made their yearly autumnal circuit with their kits. The children had a happy time during their sojourns, which lasted one, two or more weeks, according to the number of feet to be shod. The boys, who had doffed their old shoes, when the winter snows had scarcely disappeared, to enjoy the luxury of going barefoot, were now no less joyful in the anticipation of new shoes to protect their feet from the frosts or early snows.

Large boys and girls, when leather was scarce and dear, have been known to go barefoot the greater part of the year. It was not a rare thing to see girls as well as boys, not of the poorer families, at Sunday meetings with feet unshod. Some made shoes for themselves and their families. Boots were little worn, even by men, except in the winter season. Men's boots and shoes were usually made of coarse leather called cowhide. Occasionally a young man attained the enviable distinction of appearing in a pair of calf skin boots, made by a skillful workman. Boots and shoes for both feet were made on one last. In those days "rights and lefts" were unknown. In this department of dress, as in others, in respect to style and cost, the past and present exhibit a remarkable contrast.

A writer of about 1880 says:

"We can only add, a general revolution in household labor has taken place within the last fifty years. The substitution of cotton for flax, and of the various kinds of labor saving machinery for hand-cards and spinning wheels and looms has vastly lightened the labors of women. One of the results of these improvements is the opportunity they afford for mental and intellectual culture. Can we not affirm that the mass of American women duly improve these opportunities?"

This writer would no doubt be amazed at the further changes that another sixty years has brought forth.

The usual manner of providing a home for a young couple was interesting. A spot was selected on a piece of land of one of the parents for their habitation. A day was appointed, shortly after the marriage, for commencing the work of building their cabin. The laborious work was that of the choppers, whose business it was to fell the trees and cut them off at proper lengths. A man with a team for hauling them to the place, and arranging them, properly assorted at the sides and ends of the building, and a man whose task it was to search the woods for a proper tree for making clapboards for the roof were required. The tree for this purpose had to be straight-grained, and from three to four feet in diameter. The boards were split four feet long, with a large furrow, and as wide as the timber would allow. They were used without shaving. Another group were employed in getting the puncheons for the floor of the cabin; this was done by splitting trees about eighteen inches in diameter, and hewing the faces of them with a broad-axe. They were half the length of the floor they were intended to make. The materials for the cabin were mostly prepared on the first day, and sometimes the foundation laid in the evening. The second day was allotted for the raising.

In the morning of the next day the neighbors collected for the raising. The first thing to be done was the election of four cornermen, whose duty it was to notch and place the logs. The rest of the group furnished them with the timbers. In the meantime the boards and puncheons were collected for the roof and floor, so that by the time the cabin was a few rounds high the sleepers and floor began to be laid. The door was made by sawing or cutting the logs in one side, so as to make an opening about three feet wide. This opening was secured by upright pieces of timber, about three inches thick, through which holes were bored into the ends of the logs for the purpose of pinning them fast. A similar opening, but wider, was made at the end for the chimney. This was built of logs, and made large enough to admit of a back and jams of stone. At the square two end-logs projected a foot or eighteen inches beyond the wall to receive the butting poles, as they were called, against which the first row of clapboards was supported. The roof was formed by making the end-logs shorter, until a single log formed the comb of the roof; on these logs the clapboards were placed, the ranges of them lapping some distance over those next below them, and kept in their places by logs placed at proper distances upon them.

The roof and sometimes the floor were finished on the same day of the raising. A third day was commonly spent by a few carpenters

in leveling off the floor, making a clapboard door and a table. This last was made of a split slab, and supported by four round legs set in auger holes. Some three-legged stools were made in the same manner. Some pins stuck in the logs at the back of the house supported some clapboards, which served for shelves for the table ware. A single fork, placed with its lower end in a hole in the floor, and the upper end fastened to a joist, served for a bedstead by placing a pole in the fork, with one end through a crack between the logs of the wall. This front pole was crossed by a shorter one within the fork, with its outer end through another crack. From the front pole, through a crack between the logs of the end of the house, the boards were put on which formed the bottom of the bed. Sometimes other poles were pinned to the fork, a little distance above these, for the purpose of supporting the front and foot of the bed, while the walls were the supports of its back and head. A few pegs around the walls, for a display of the coats of the women and hunting shirts of the men, and two small forks or buck-horns to a joist for the rifle and shot-pouch completed the work of the carpenter. In the meantime the masons were at work. With the heart pieces of timber of which the clapboards were made they made billets for chinking up the cracks between the logs of the cabin and chimney; a large bed of mortar was made for daubing up those cracks; a few stones formed the back and jamb of the chimney.

The cabin being furnished, the ceremony of the house-warming took place before the young couple were permitted to move into it. The house-warming was a dance of the whole night's continuance, made up of the relatives of the bride and groom, and their neighbors. On the following day the young couple took possession of their new home and, in this humble abode, were most likely happier than many present-day couples who demand and have all of our modern conveniences.

The great inconvenience to pioneer life is the want of the many articles essential to the comfort of a family which the farm cannot supply. Therefore, no immigrant is more welcome in a new settlement than the first merchant. Fortunately, there is usually someone ready to establish a store when and where there is a population sufficient to sustain one. All of the early stores were kept in log buildings. The first stocks of goods were small, yet they comprised most of those articles which were needed by the settlers.

But the gratification of some at the advent of the early merchant was greatly moderated by their inability to purchase his wares. The

inhabitants generally were poor. They had expended nearly all their money in their removal and the little they had left was wanted to buy the absolute necessities. Farmers who had been here long enough to raise a small surplus obtained some money from the newcomers. But the majority were not so fortunate.

Goods were dear, having been transported at great cost. They were first brought from Pittsburgh, *via* the Allegheny River to the region of the Allegheny Valley, and sometimes two weeks were occupied in the round trip, though usually it only required four to five days to go from Pittsburgh to Franklin, and about half that time from Franklin to Pittsburgh. After wagons were introduced, the round trip was usually made in about four days, though on many occasions double that time was used. But the high price of the merchant's goods was but half of the farmer's misfortune. While he had to pay a high price for nearly every article of store goods, he, much of the time, was obliged to sell the products of his farm at about half of the cost in labor. Wheat sometimes sold as low as a shilling a bushel; corn 6d. per bushel; rye, 1s.; buckwheat, 1s.; oats, 6d. per bushel; tallow, 2cts. per pound; lard, 2cts. per pound; pork, 4s. per cwt.; beef, 1 to 2d. per pound, and other products in proportion. Ofttimes the prices were double and even five times the foregoing, but the market as a rule was "weak and no buyers."

The books of George Power, of Franklin, the first merchant in Venango County, are a fair indication of the storekeeping system of western Pennsylvania. The earliest account book available bears the date of 1794, but as this only gives the aggregate amounts, the retail prices cannot be gleaned. The old mode of reckoning was by pounds, shillings and pence, and for a very considerable time the prices of goods per yard or pound, both in buying and selling, at wholesale and retail, were given in shillings and pence. Between 1794 and 1800 some of the prices were:

"Wool Hatt 11s 3d; (1794) Bandanna Handkf. 11s 3d; Half a pound cut and dry Tobacco, 1s 6d; (1795) 1 skillet 12s; Half a pound Lead 11¼ d; One fourth bushel of salt 6s 6½d; 8½ pounds Bacon, 8s 6d; Pound of coffee 3s 9d; 1 pair *Mockisins*, 3s 9d; Half a quire of Paper, 1s 6d; Two pipes, 11d; One fourth pound of Tobacco, 9d; Half a bushel Potatoes, 3s 9d; Half pound Gun Powder, 5s 7½d; Two yards calico, 7s; One pound lead, 1s 10½d; One pair Boots, 2£ 16s 3d; One fourth yd. *Corderoy*, 4s 9½d; One half a dozen Knives and

forks, (1798) 12s 6d; Two pounds soap, 2s 10½ d; Five Tin Cups, 4s 8d; Five yards Durant (?), 1£ 2s 6d; One Peck Salt, 7s 6d; One crooked Comb, 1s 10½ d; (1794) One Pen Knife, 3s 6d; Three fourths yard *Mersailles* Pattern, 14s ½d; Two and one half yards muslin, 9s 4½d; One yard muslin, 3s 9d; Three and a half yards binding, 1s 7d; Forty-seven pounds of iron, 1£ 19s 2d; One pair leggings, 7s 9d; One half dozen spoons, 10s 1½d; One pair *Rose Blankets*, 2£ 12s 6d; One pair cotton Hose, 15s; One quire paper, 3s; One Mill Saw File, 5s; One Blanket, 19s 9d; One Gimlet, 4s; Two dozen screws, 1s 10½d; Two hundred Tacks, 3s 9d; Two pounds Coffee, 8s; One ounce Indigo, 1s 6d; One fourth-pound (1796) of pepper, 2s; Four *skanes* thread, 1s; Five yards ribbon, 7s 6d; Nails one pound, 3s; One Nutmeg, 1s; Factory Muslin, one yard, 6s; Maccaboy Snuff, one pound, 13s; Three Sticks Twist, 3s; One pair shoes, 15s; One dozen Buttons, 3s; One razor, 2s 6d; (1789) One yard Scarlet Cloth, 3s 6d; One half a hundred Quills, 8s; Three yards *Furstin* (1797) 16s 9d; One yard swanskin, 7s 7½d; One half a pound of Lead, 1s; One quart Salt, 1s 10½d; One paper of Pins, (1798) 3s; One pair *Sisars* (1798) 4s. 9d."

Whiskey, that staple article in those days, varied in price from 6 to 15s. per gallon, but the books indicate no perceptible decrease in its consumption. On the 26th of December, 1798, Marcus Hulings, Sr., is credited with one barrel of salt, £7 10s.

Our surprise at these prices is modified when we consider the cost of transportation. In 1798 Mr. Power paid Marcus Hulings, Jr., £4 for freighting, by boat, four barrels of flour from Pittsburgh to Franklin, and on the down trip Hulings charged £3 for one thousand pounds of *dear* skins. With the products of their farms, at the prices they bore a few years later, farmers could hardly have paid for store goods, at the prices charged. Nor did farmers find permanent relief until the commencement of steamboat navigation on the Allegheny, and the development of the furnace business.

In those early days whiskey was the article whose sale was never diminished on account of hard times. In 1797, we count, on five successive pages, sixty-nine separate and distinct charges for this article. During the War of 1812, flour rose to \$19 per barrel; hollow castings ten cents per pound, and salt to \$12 per barrel. Maple sugar was exchanged at six cents per pound for goods; butter at six to eight

cents; oats, ten to twelve cents per bushel; and other products in proportion.

To facilitate the collection of debts, merchants, after cattle were plenty, received the same in payment from their customers and drove them to eastern markets, or sold them to drovers from the East. Pork also was taken on account at prices which contrast strikingly with the present. Well fattened pork, dressed, was sold for two dollars per hundred pounds. Lumber, with its products, lath, shingles,



"The Diamond," St. Mary's

etc., were received, and other things, such as furs, etc. These latter were generally shipped to Pittsburgh, and thence down the river.

From what has been related, it will readily be inferred that trade was greatly restricted by the scarcity of the usual circulating medium. Few goods were sold for cash. Business was done on the credit and barter system, not only by and with merchants, but between the people. Notes were made payable in grain, lumber, cattle, furs, etc., and sometimes contained the stipulation, "at cash price." Almost everything had a cash and a barter, or a credit price. It was, however, not always easy to ascertain the cash price. Merchants often suffered great loss by this system of trade. Losses by bad debts, and losses on grain and other commodities, which it was almost impossible to sell for cash, rendered the business an unsafe one.

Most of the business was, for many years, transacted in the river towns, which were first settled, and possessed superior commercial advantages. Maple sugar, long an important article of trade, came in large quantities from the settlements. The inhabitants generally supplying themselves, the price is said to have been at times as low as four cents per pound. Almost the only store sugar for years was the white, refined, put up in hard ball, solid loaves, of a conical form, and called loaf or lump sugar, and was wrapped in strong and coarse paper. It was sold chiefly for sweetening medicines and the liquors of tavern keepers.

The history of pioneer life generally presents only the dark side of the picture. The toils and privations of the early settlers were not a series of unmitigated sufferings. The addition of each new acre to their "clearings" brought with it fresh enjoyment, and cheered them on in the pursuit of their ultimate object, an unincumbered and a happy home. They were happy also in their fraternal feelings; or, as one expressed it, "the feeling of brotherhood—the disposition to help one another"; or in the language of another "society was uncultivated; yet the people were very friendly to each other quite as much so as relatives at the present day."

A writer of a half century ago said:

"We could now hardly endure the thought of exchanging our comfortable and elegant carriages for the rude ones of our fathers and grandfathers which served the various purposes of visiting and of going to mill and to meeting; yet who doubts that families had a 'good time' when they made a visit to a 'neighbor' at a distance of several miles through the woods on an ox sled? Our mothers were clad in homespun of their own make; and not a few remember the glad surprise when fathers on their return from market presented their faithful helpmeets with a six yards calico dress pattern for Sunday wear. And it is presumed that the wearer was in quite as devotional a frame of mind and enjoyed Sabbath exercises quite as well as she who now flaunts her gorgeously trimmed silk of fifteen or twenty yards, made up into a style transforming the wearer into the 'likeness' of something never before seen or known 'above,' or 'on the earth beneath,' and altered with every change of the moon."

This writer would be greatly surprised by the still more modern mode of transportation, as well as the present-day manner of dress and adornment of my lady.

In the early days people were happy in their families. The boys, having labored hard during the day, sought rest at an early hour. Parents had the pleasure of seeing their sons acquiring habits of industry and frugality—a sure prognostic of success in life. The “higher civilization” had not yet introduced those more modern popular institutions, the saloon and the billiard room in which so many youths later received their principal training, while still later, more modern innovations and undesirable environments, together with the decline in the old-time home influence, have had their effect in the development of character.

Fewer parents spent sleepless nights in anxious thought about their “prodigal sons” or had their slumbers broken by the noisy entrance of these sons on returning from their midnight revels. They saw no clouds rising to dim the prospect of a happy future to their children. Never were wives and mothers more cheerful than when, like the virtuous woman described by Solomon, “they laid their hands to the spindle, and their hands held the distaff”; or when, with their knitting work or sewing, and baby, too, they went, unbidden, as the custom was, to spend an afternoon with the “neighbor women,” by whom they were received with a hearty, unceremonious welcome. “The latch-string was out” at all times; and even the formality of knocking was, by the more intimate neighbors, not observed.

Nor did they lack topics of conversation at these visits. Prominent among them were their domestic affairs—their manifold industrial enterprises and labors—and the anticipated reward of their privations and toils. Their conversation, some may suppose, evinced no high degree of intellectual culture; yet, as an indication of such culture, surely it would not suffer in comparison with the gossip of many of our modern ladies at their social gatherings.

The following extract from the pen of a pioneer mother in the region may be read with interest by some:

“The country around us was an entire wilderness, with here and there a small cabin, containing a small family. We were nearly all new beginners, and although we had to work almost day and night, we were not discouraged. There were many and serious trials in the beginning of this country, with those who settled amid the heavy timber, having nothing to depend upon for a living but their own industry. Such was our situation. However, we were blest with health and strength, and were able to accomplish all that was necessary

to be done. Our husbands cleared the ground, and assisted each other in rolling the logs. We often went with them on these occasions, to assist in the way of cooking for the hands.

"We had first-rate times, just such as hard-laboring men and women can appreciate. We were not what now would be called fashionable cooks; we had no pound cakes, preserves or jellies, but the substantials, prepared in plain, old-fashioned style. This is one reason why we were blessed with health; we had none of your dainties, knick-knacks, and *fixings* that are worse than nothing. There are many diseases that we never even heard of forty to sixty years ago, such as dyspepsia, neuralgia, and many others too tedious to mention. It was not fashionable then to be weakly. We could take our spinning wheels and walk two to four miles to a spinning frolic, do our day's work, and after a first-rate supper, join in some innocent amusement for the evening. We did not take particular pains to keep our hands white; we knew they were made to use for our advantage; therefore, we never thought of having hands just to look at. Each settler had to go and assist his neighbors ten to fifteen days, in order to get help in return in log-rolling time; this was the only way to get assistance. I have thought proper to mention these matters, that people now may know what the early settlers had to undergo. We, however, did not complain half as much as people do now. Our diet was plain; our clothing we manufactured ourselves. We lived independent, and were all on an equality. How the scene has changed! Children of these same pioneers know nothing of hardship; they are spoiled by indulgence, and are generally planning ways and means to live without work."

It is, indeed, to many who have been brought up in the lap of ease, not a little surprising that a wife and mother should do the housework for a family in which were six, eight, or more children, and occasionally some hired men, without extra help. Yet such instances were common.

But advancement in society is an American trait. Had we pursued the course of the greater number of the nations of the earth, we should have been, at a much later date, treading in the footsteps of our forefathers, from whose example in many respects we should have thought it criminal to depart.

The horse paths by which the early settlers made their laborious journey over the mountains, for salt, iron and other necessities, were



Franklin City Building

succeeded by wagon roads, and these again by turnpikes, which brought the distant region, once denominated as the backwoods, into close and lucrative connection with the great Atlantic cities. Then followed, in quick succession, as if by magic enchantment, canals, railroads, and telegraphs. The duration of time for making the once perilous journey over the mountains was successively reduced from weeks to days, and from days to hours.

The rude sports of former times—the trials of muscular strength and activity—gave way to the more noble ambition for mental endowments, to the spread of education, and skill in the useful arts.

In the stead of the rude song, roughly and unskillfully sung, succeeded the psalm, the hymn, the quartette glee, and the swelling anthem.

The linsey and coarse linen of the early settlers were in time exchanged for the substantial and fine fabrics of Europe and Asia, and soon superinduced the spirit of American genius for manufacture, which we now see leading the world's industries.

The hunting shirt gave place to a suit of broadcloth, and the feet that once trod in moccasins were enclosed in boots and shoes of tanned leather.

Our development in the useful arts finally brought forth our great manufactories of iron and steel, crockery and glassware, implements and machinery, and the rude utensils of the pioneers are supplanted with articles of the most improved utility and beauty, fabricated at our very doors.

In no other locality of the globe could anything occur to equal the immense value of the development of petroleum in the oil regions of Pennsylvania, which phase of this work is treated in other chapters.

Instead of a blind imitation of the manners and customs of their forefathers, the people *thought* and acted for themselves; they changed themselves and everything around them. The changes gave new currents to the public feeling and individual pursuit, causing the improvements in the dress of the people and the furniture of their houses. Had the hunting shirt, moccasin and leggins continued to be the dress of men—had the three-legged stool, the noggin, the trencher and wooden bowl remained as the furniture of their houses—progress towards science and civilization would have been much slower.

Terrible as is war, every war has created new developments and American ingenuity may be depended upon to solve our present-day problems, and in their solution, most likely make important discov-

eries. Already the war is helping to develop new ideas, new methods and new materials. We can be certain there will be more and more each month as the conflict continues. Substitutions may be noticed right now in the modern kitchens. Ice cube trays, formerly made of aluminum or steel, are now of paper composition rather than zinc, aluminum or chrome. Doors may be of masonite hardboard instead of aluminum or steel.

In the washing machine there are such substitutes as bakelite, plastic and enamel for the aluminum in agitators. The tub, previously of aluminum, is now enamel. Plastic is used instead of zinc in handles while the wringer may be of iron instead of aluminum.

Looking at your toaster, you may find glass and enamel instead of steel, aluminum or nickel in the frame. Pots and pans are now of glass, enamel, and ceramic material instead of aluminum, steel, copper and tin. Coffee pots heretofore aluminum are now of china, while wood has taken the place of steel in utility cabinets. Even the lining of your bottle tops is likely to be of paper and other coated materials which have replaced the usual cork.

Tin cans in some cases have been produced with thinner coats of tin, in other cases have been replaced completely with glass and other types of containers. We haven't begun to see the many changes coming in tin cans and containers.

Tin foil packages and tubes are being replaced by waxed paper and other paper composition packages, or by glass.

Wood flour is taking the place of cork in linoleum, while wool-rayon combinations or wool from South America is replacing the domestic wool in our rugs. Door knobs, switch plates, trim and the like today are plastic instead of brass.

In the gas range, enameled cast iron has taken the place of aluminum in burners and other parts. Electric ranges substitute porcelain for zinc in the oven vent, plastic for chrome in the trim, porcelain enamel for aluminum in the cooker pail.

These are but a few examples of what has been done so far. Some of them will stay—after the war is won—and some will be replaced by new raw material. And in these developments northwestern Pennsylvania industries have been active and so shall continue.

Each generation thinks of itself as "modern" and looks back upon the days and ways that were considered "modern" once. Fundamentally, the world does not change much. Children still grow through adolescence to maturity, settling down at last to watch their own children repeating the age-old process. A Nation's greatest

asset is its youth and with the characteristic initiative of our present-day youth, and the opportunities presented to them through scientific research, and with proper training, encouragement and inspiration, we may look forward to the greatest advancement in history.

CHAPTER V

Military History of the National Period

Born of warfare, but supposedly devoted to the cause of peace, our country over a period of more than three centuries has never had a citizen reach middle age who has not lived through at least one war. There are men in this year of our Lord 1942 who have engaged in military service during three international conflicts—the Spanish-American War, the World War, the Global War. The span of years between the first and the present is but forty-four. Prior to 1898, the people of the United States heard the call to military duty in four other wars—three, to secure and preserve our national existence, the Revolution, the War of 1812, and the Civil War; one to acquire territory from a neighbor, the Mexican War. Earlier were Indian and French struggles that began soon after the Pilgrims and Cavaliers crossed the Atlantic and initiated the civilization of the New World. Of the first colonizers, only William Penn established a policy that enabled the white man to get along peaceably with the aborigines. None of the founding fathers dreamed more nobly of an Utopia which would be a refuge for the oppressed of all lands, a home for the free and the brave. He lived to see his “holy experiment” well on its way, but died long before the folk of his “City of Brotherly Love” and the vast hinterland of the Commonwealth that bears his name, paid a terrible price to preserve the simpler elements of his ideals.

It is customary to write of northwestern Pennsylvania that its military history begins with the War of 1812, since it was not settled until after the American Revolution. This is accurate only so far as organized fighting done by residents of the region is involved, for there were few of these prior to the Revolution. But, as has been shown in other chapters of this work, it was the cockpit in which there were fought to a finish events of major importance. It was in the upper reaches of the Allegheny River that early warfare raged for years because this river was close to the disputed boundary between

several nations, the border of what was known as "The Debatable Land," of which Hanna said in his "Wilderness Trail": "That soil had been drenched with the blood of more slaughtered foes and massacred innocents, white and red, than perished by violence elsewhere within the bounds of the colonies in all actual battles of Spanish and English, English and French, British and American, from the accession of Queen Anne to the death of George Washington." Foreign historians give far more weight to the effects upon the creation of the United States by the Allegheny River and its tributaries as an "imperial highway for Spain, France and Great Britain" than do those of our own country, or even of Pennsylvania. The history of this corner of the Commonwealth is far older than the story of its permanent settlement by the white race.

Leaving the broader aspects of Colonial conflicts in northwestern Pennsylvania, there is a minor effect of these upon the development of this part of the State worthy of passing consideration. It is, that the wars of our Republic have been followed by increases in the population of western Pennsylvania. There are several explanations of this fact, only one of which is offered here—that marching soldiers during the Revolution, the War of 1812, and the Mexican affair, passed through this region, liked it, and returned to make it their home. There were many veterans of the Revolution who migrated to this part of the State. No doubt a great many of these came because they received land as a reward for their military service in the Continental forces. Others, quite possibly, moved into the area of the present twelve counties, because of what they learned as soldiers under such leaders as Colonel Daniel Brodhead, who campaigned up the Allegheny River Valley in the late summer of 1779. Brodhead reporting on his expedition wrote: "I have a happy presage that the counties of Westmoreland, Bedford and Northumberland, if not the whole western frontier, will experience the good effect of it." Of course, he had in mind the advantages gained by the defeat and pillage of the tribe of Senecas and the Iroquois Federation.

In the long run that was not all, for be it recalled that it was on the Allegheny, near where the Cornplanter Reservation was later established, that the colonel looked down from the hills and saw Iroquois settlements extending for eight miles along the rich bottom lands of the stream. He reported to George Washington, his commander-in-chief: "The troops remained on the ground three whole days, destroying the towns and the corn fields. I never saw finer corn although it was planted much thicker than is common with

our farmers. The quantity of corn and vegetables destroyed at several towns . . . must certainly exceed five hundred acres." While this does not sound much like a military report, it certainly interested Farmer George Washington, and tales of the amazing fertility of certain parts of the "western wilderness" were widely spread. The few hundred soldiers of Brodhead did not forget the land of corn when they were discharged from the army and became the best publicity agents the region ever had, not even barring the amazing advertising by the land companies of the 1800s. John Bach McMaster, former professor of history in the University of Pennsylvania, devoted nearly a half hundred pages of his "History of the People of the United States," to the effects of the expeditions of Brodhead and Sullivan upon the settlement of western Pennsylvania and New York. He also showed how the passage of recruits through northwestern Pennsylvania to Erie, Buffalo, and points around Niagara, during the War of 1812, also made people better acquainted with the region and attracted settlers. In passing, McMaster also drew attention to the temporary checking of development in the counties close to Lake Erie caused by the War of 1812, a set-back from which they quickly recovered when peace once more was upon the land.

War of 1812 (1812-1815)—When the news that the young Republic had become involved in a second war with Great Britain on June 18, 1812, northwestern Pennsylvania and New York were better prepared for the conflict than they were for any other war. It is probable that if all were known, a larger proportion of its manpower took up arms than in the war period of after years. As one writer has over-stated it: "Every able man either marched in the direction of Lake Erie or scurried in fear in the opposite direction." It had been immediately recognized that the western boundaries of the Nation would be the back door by which the British would try to invade the United States. Lake Ontario and Lake Erie were but the farther extensions of the St. Lawrence River, the route that would be chosen for this invasion. However small the population in the western sector, it was for the most part made up of fighting folk, who, although living far from the Atlantic Ocean and possibly not particularly interested in the causes of the new conflict with England, were ready to protect their own new possessions and freedom.

In 1800 the organization of five western counties had been authorized—Crawford, Erie, Mercer, Venango, and Warren. The first named was set up at once; the others took from three to nineteen

years to establish county governments. Up to and through the War of 1812 this group practically functioned as the county of Crawford, a condition which made for unity. Meadville, its county seat, became a sort of minor clearing house for military affairs, although most of the men who enlisted started off for the nearest place where the Britishers were expected. They joined, or became units, usually in Buffalo in one direction, or Pittsburgh in the other.

Let it be said again, many of the pioneers of that time were veterans of the Revolution, not yet old in age. Our country's wars have been fought by young men to a much larger extent than is generally realized in this day when there has been hesitancy about calling into our armed forces anyone younger than twenty. The nucleus of veterans and their acquaintance with at least some of the arts of war, formed the basis of a militia system that, whatever its faults, did teach something about drilling, working together with other men, and had built up a small supply of arms. A great deal of fun has been poked at the militia of the post-Revolutionary days, but it was this much-maligned military organization that fought the war in western Pennsylvania and New York. Every section filled its quota and more in each new draft. But we are getting ahead of our story.

The whole United States had heard international rumblings that portended a storm that might reach its coasts, but hoped for the best. It was not many years after the end of the Revolution that England became involved in difficulties with France, or rather with Napoleon Bonaparte, and had its commerce thrown into confusion. Our infant Republic, as the only neutral nation bordering the Atlantic Ocean, began to reap the advantages of her position, and her shipping and ships increased by leaps and bounds. It was a golden era in the American mercantile marine. England strongly objected to a growing competitor upon the high seas and revived an old ruling of the Admiralty Courts of 1756 by which the British claimed the right to seize and to condemn the ships of other nations. The rule or "Orders of Council" was expanded to mean seizure of cargoes and seamen, especially the latter, for there was great need for sailors in the enlarged navy. President Thomas Jefferson retaliated with the "Embargo Act" of December 22, 1807, prohibiting exportations from the United States, which tied up our ships to rot at the wharves of our Atlantic ports. In the meantime our navy, such as it was, was allowed to deteriorate as well. The embargo did more harm to our people than it did to Great Britain, and so it was revoked and the Non-intercourse Act passed by Congress, which was little better. In

April, 1809, the English authorities began negotiations by which it was agreed that if the United States would repeal its non-intercourse law, the British Government would give up its application of the "Rule of 1756" ("Orders of Council"). When the news of this negotiation arrived in London, Parliament refused to ratify the proceedings and recalled its minister at Washington. There was nothing left for the United States to do but declare the existence of a state of war between the two countries. Congress, therefore, took appropriate action and on June 18, 1812, war was declared. The reasons given for the declaration were stated in the proclamation as: The violation of the American Flag upon the high seas; blockading of American ports; the impressment of our seamen; the refusal of Great Britain to repeal the Orders of Council; and the uprisings of Indians in our Northwest. One of the ironies of history is that five days after the action of Congress and before our declaration of war arrived in England, the British Government had withdrawn its Orders of Council, the real cause of the trouble between the Mother Country and her lusty offspring. Had there been a cable or the radio there is every likelihood that no War of 1812 would ever have marred the pages of history.

Communications were not so efficient, either, to northwestern Pennsylvania, for it was six days before the news of the Republic's declaration of war against England arrived in its principal towns, and even longer in being spread to the whole region. Yet be it realized that excellent time was made by express riders in traveling four hundred miles or more over bad roads and trails. The local response to the startling news was immediate. Men left their simple tools in the fields, gathered together such firearms as they possessed, and were off to the nearest militia practice ground, or to the larger settlements, collecting men as they went along. They knew that the British in America were not unprepared for war; that there were regiments of regulars in Canada; well trained local militia units; Indian allies; and naval ships and transports on Lakes Ontario and Erie, with plenty of ammunition for all troops and vessels. The American settlers were not wholly unprepared themselves, for skeleton regiments of militia had been organized in the five counties of which Meadville, Crawford County, was the center. They had little of the material of war, because the eastern part of the State had paid very little attention to the warnings that had come from the border sections. Philadelphia, the only good seaport, was many miles from the Atlantic and its folk were too much interested in licking the commercial wounds

caused by the Embargo and Non-intercourse acts, and the English blockade at the mouth of the Delaware River, to think much about the western counties. Capitalists and merchants were ever prone to forget the farmer, especially those three or four hundred miles away in the "wilderness." If the truth be told, the East as a whole, from Pennsylvania to Maine, was divided in its attitude toward the war. No conflict was wanted because of a fear that it would ruin forever their commercial prospects. Massachusetts even threatened to secede from the Union, a fact that later was used by the South as an argument when it seceded from the Union in 1861. Massachusetts, Connecticut



State Armory, Corry

and Rhode Island refused to furnish their full quota of soldiers, and New York was almost as obstinate. Had England been less seriously engaged in a struggle against Napoleon in the 1800s and had used its full strength against the Atlantic States, we might now have only a dominion status in the British Empire.

The frontiers were thoroughly aroused; however, they knew what the fight was all about as affecting their own futures. At this late date there are few who are interested in what the people of these frontiers did during the War of 1812, and it is not possible within this simple review to more than name events and outstanding leaders. Governor Simon Snyder, of Pennsylvania, issued a strong appeal.

Western Pennsylvania had not waited for this. As early as 1807, several regiments had been formed here and had continued training. There were above two thousand troops in Meadville, when orders came to move north to Niagara, shortly after the war began. Probably an equal number had gone to Pittsburgh and marched to Fort Meigs when General Hull surrendered Detroit and caused consternation in western Pennsylvania.

The first year of the war was largely naval in character and marked by noteworthy achievements of our ships, as for example, the victory of the "Constitution" over the British "Guerrière," and the later captures by "Old Ironsides" of the English frigate "Java" off the coast of Brazil, the "Picton," the "Cyane" and the "Levant." But no less glorious in the annals of the American Navy was the battle of Lake Erie and the exploits of Commodore Perry. We take not one bit from his abiding fame, when we summarize that noted battle: Nine vessels, with fifty-four guns, 492 officers and men, under Oliver Hazard Perry, fighting six vessels with sixty-three guns, 502 officers and men. When Perry lost four-fifths of his men aboard the flagship "Lawrence," he transferred to the brig "Niagara" in the face of terrific fire. In the end a complete victory was won and Perry wrote his memorable report to General Harrison on a September night in 1813: "We have met the enemy and they are ours; two ships, two brigs, one schooner and one sloop." It was the first and only time in the proud history of England that a whole squadron of the British fleet struck its flag to a foe. By many historians this was the decisive battle of the second war for American independence.

To those of the present generation, thinking mainly of production in a mechanized war, the building of Perry's fleet may be rated equally as marvelous as the victory on Lake Erie. Except in local histories the story of the creation of a fleet of war craft in days, instead of months, has seldom been related. Few more foolhardy enterprises were ever undertaken and with less prospect of success. On Presque Isle Bay, and in small river mouths, men began to construct vessels. One Captain (or Mr.) Dobbins came to Lake Erie in the spring of 1813 to build gunboats. He found but one ship carpenter, so employed a few house carpenters and unskilled workers to assist him. There were trees in plenty but little sawn and cured lumber. The captain secured all the hardware in the stores and farms for miles around, but so small was the supply that he had to be content with any form of iron that could be worked into bolts, spikes and other ship requirements. On March 10, 1813, Noah Brown arrived with twenty-

five carpenters. Seven days later Lieutenant Perry made his appearance. A young man of twenty-seven years, he had been placed in command of a Lake Erie war fleet, when and if such a fleet could be constructed. It might prove inspiring for some author of wide circulation to write the story of Brown, Dobbins and Perry, and their summer's job of throwing together sufficient craft to contest the waters of Lake Erie, with an experienced and substantial British fleet. The "Niagara," "Ariel" and the "Lawrence" were christened on the beach of Cascade Run. One was named in honor of the immortal Captain James Lawrence, whose dying words were the slogan adopted by Commodore Perry's squadron, "Don't Give Up the Ship." The "Tigress" and the "Porcupine" were built on the beach near Lee's Run. The "Caledonia," a brig, and three schooners, put together farther north, arrived late in June, 1813, opposite Erie. During all the time the fleet was being gathered and built, enemy ships prowled in the neighboring waters threatening a landing and the destruction of the craft before they were launched, or while they lay in shallow waters from which they were moved only with difficulty. Evidently the very shallowness kept the enemy from attacking. All hail to the men and officers who fought the gallant three-hour battle on Lake Erie! All hail as well to the builders of the small vessels and their helpers, the house carpenter, blacksmith, farmer, storekeeper, and the devoted women who made their strenuous labors possible!

As a wholly unimportant footnote to history we venture to quote a paragraph concerning the fate of most of the ships that engaged in the famous battle. Says J. E. Reed:

"Perry's ships were disposed of as follows: The 'Ariel' and 'Chippewa,' sailing for Buffalo, were driven ashore and went to pieces; the 'Trippe' and 'Little Belt' went to Black Rock, where they were burned by the British; the 'Lawrence' and 'Niagara,' in April, 1814, were put in commission and sent to Lake Huron, where they were repulsed when they made their attack, and returned to Lake Erie; the 'Detroit' and 'Queen Charlotte' were sent from Put-in-Bay to Erie, and assisted in the Lake Huron attack, and returned to Erie with the others; the 'Scorpion' and the 'Tigress' were surprised and captured by the British at the lower end of Lake Huron by boarding them at night; the 'Somers' and 'Ohio' went to Fort Erie, where they were captured at night by the British and destroyed; the Navy Department in 1815 sent orders, and the 'Lawrence,' the 'Detroit' and 'Queen Charlotte' were

sunk in Misery Bay for their better preservation; the 'Caledonia' and the 'Lady Prevost' were sold and converted into merchant vessels; the 'Porcupine' was transferred to the revenue service, while the 'Niagara' was kept for a time as a receiving ship, when she was floated over into Misery Bay and sunk near its eastern shore."

In June, 1826, the Federal Government disposed of the sunken vessels to private speculators, but not much was done with the hulks. The "Detroit" was later used to highlight a holiday spectacle at Niagara when she was sent over the falls. The useless "Lawrence" was raised from its lake-bed, cut in two, and rebuilt at the Philadelphia Centennial of 1876. She failed to interest the crowds because they thought her a "fake." No craft so small could have been the flagship in the great battle of Lake Erie. The "Niagara" was raised and rebuilt for the centennial anniversary, held at Erie, and thereafter was cradled on the bay side of the present Peninsula (Presque Isle) State Park, a most cherished relic.

Just how bright a page in the history of the War of 1812 was written by the volunteers from northwestern Pennsylvania remains still a subject of controversy. As in most American wars there was a division of opinion and readiness to serve. As already mentioned, the region supplied its quota to the militia and other armed forces. Contingents went west into Ohio and north to the Niagara River. What they accomplished, or failed to accomplish, is inextricably intertwined with the activities of other contingents. A summer was spent in the training and equipment of troops, and late in the autumn an impatient army under General Van Rensselaer decided to attack the British in the vicinity of Queenstown, Canada. It was a matter, however, of invading "foreign" territory. Under the law of that day, this was something that the militia could not be ordered to do, and many refused to join in an attack on Queenstown. It is worthy of more than passing note that in World Wars Nos. I and II, this same objection was in order, particularly in the Province of Quebec, but less strongly in the United States.

It is well known that we lost in that Canadian foreign invasion, our forces fleeing before superior forces of British regulars and Indians. At Lewiston three hundred of our men were trapped and surrendered. The whole affair was just another example of what has been the history of our Nation in wars, unpreparedness, divided public support, reluctance to fight a foreign conflict, and then a uni-

fied Nation of enormous potential strength exerting its full power with ever-increasing speed and sacrifice.

In December, 1812, and during the following year, several drafts were made in western Pennsylvania and New York to repel the English in their advance on Buffalo. Says a military authority:

"The men left behind families in abject poverty and were, themselves, without proper clothing, food, shelter or munitions; they comprised a majority of the able-bodied men of the country and they were placed in the front line to fight some two thousand British regulars and Indian allies. They had poor support and, while many fought desperately, many more turned and ran; they were defeated before they started. They cannot be blamed, for they were personally resolute and brave; they were not properly led, neither officers nor men were properly trained, and there could have been no discipline among them."

Northwestern Pennsylvania men were with the army under General Harrison that pursued the retreating British up the Detroit River to force a battle at the Thames, followed by the defeat of Proctor and the death of the Indian, Tecumseh. This broke the back of the English and their Indian allies in Upper Canada. Other men were among the outnumbered Americans who fought the "greatest battle of the war" at Lundy's Lane. Although results were not decisive, the Americans remained on the battlefield. This was in July, 1814, and England with major troubles in Europe, gave up her war in the New World, and peace came shortly after. This was the end of a war that would not have been fought had there been modern systems of communications, and the next time the two democratic nations engaged in conflict, it was as allies, a century later. The long continued peace along the United States-Canadian border has been a marvel to the world. One of the several things it proves is that two countries can fight each other bitterly and then become lasting friends. On December 31, 1775, only one square mile stood between our Continentals under Benedict Arnold and the complete possession of what is now our friendly northern neighbor. There are some historians who believe that had the battle of Lake Erie been lost, we might now be just a part of the British Empire.

The final tragedy of the War of 1812 was that *after* a treaty of peace was concluded at Ghent, December 24, 1814, the bloody battle of New Orleans was fought on January 8, 1815; and on February

twentieth of that same year the "Constitution" met and captured the British warships "Cyane" and "Levant."

The War with Mexico, 1846-1848, made little impression on the people of northwestern Pennsylvania, with whom it seems to have been unpopular, or at least failed to get much support. It was fought mainly by the regular army and navy, and frontiersmen, although as always, there was a Presidential call for volunteers. There never was any shortage of men for the adventure into the practically unknown Southwest. The principal western Pennsylvania recruiting headquarters were at Pittsburgh, where an infantry regiment rendezvoused in December, 1846. Six of its companies came from Philadelphia, one each from Pottsville and Wilkes-Barre, which in the dead of winter marched over the mountains from Chambersburg, the end of the railroad of that time. In Pittsburgh they were met by two companies, the "Jackson Blues," under Captain Alexander Hay, and the "Duquesne Grays," under Captain Herron. These two units contained volunteers from northwestern Pennsylvania, although some others joined the army on its way south, especially from the three western counties. There were representatives in other Pennsylvania regiments, such as the Hibernian Irish Greens of Pittsburgh, Captain Robert Porter, and the Westmoreland Guards, Captain John W. Johnson. The folk at home followed the events of the war and activities of their neighbors who were taking part in it. There was also a keen popular interest in former Major Winfield Scott, who had been captured near Queenstown during the War of 1812, but released and was in command at the bloody battle of Lundy's Lane. Made commander-in-chief of the United States Army, in 1841, he won fame as the leader of one of the two American armies that invaded Mexico, his troops by way of Vera Cruz advancing under great difficulties to the capital and overcoming the Mexican forces.

Major-General Taylor captured Matamoras, Monterey, Victoria, and overwhelmed General Santa Anna near the Rio Grande. For his services he won the Presidency in 1848.

It may be observed that a report written by one of Santa Anna's generals records that the American troops were defeated in every engagement, but somehow seemed always to remain upon the field of battle to advance further then or within a day or two. The writer has read southern histories which related almost the same thing about the "Yankee" forces during the War Between the States without any explanation of the eventual hemming in and cutting in pieces of the

South and ultimate surrender. Defeat, always hard to bear, stirs up animosities that are slow to die. The World War I blotted out many differences of feeling between the North and the South. Not until World War II has Mexico forgiven its big northern neighbor by taking a place by its side.

The Mexican War was not large as international conflicts go. The total losses of the whole State of Pennsylvania, which are typical of the other large states, were twenty-eight killed in battle, ten died



American Legion Home, Warren

of wounds, and 199 of disease, disabilities, 212. The casualties of the whole United States no doubt were a small price to pay for the territorial expansion of our country. Without going very far into the checkered history of Texas, under three flags, let us recall that on March 2, 1836, the Texans declared their independence of Mexico and in April of that same year captured Santa Anna and his men, thereby forcing recognition of the claim. Operating as a Republic for about a decade, the admission of Texas into the American Union, in 1845, precipitated the Mexican War. By the Treaty of Guadalupe Hidalgo, February 2, 1848, the boundary of Texas was established as the Rio Grande. By the payment of a few millions by the United States to Mexico, what is now parts of the states of New Mexico, Arizona and California were secured. Later by the Gadsden Pur-

chase, all other Mexican territory above the Rio Grande was added. Altogether this vast region comprises about one-quarter of the land area of the United States. A successful war and a good buy, and perhaps an exposition of the theory that might makes right.

Civil War (1861-1865)—So much has been written concerning the Civil War, or War Between the States, Rebellion, War of Secession, or call it what you will, by brilliant men, many of whom participated in the campaigns of that conflict; so many valuable books and records have been contributed to the vast store of knowledge that we have of the causes leading to the struggle, of the course which it took, the ways and means used in carrying it through to an end, that little can be added at this late day. If there is any interest in the internecine conflict now, when we are involved in a second world-wide fight for liberties of all the people on the globe, it is in drawing parallels and differences between two American wars that differ in size, causes, locale and character of the foes. Both were unexpected by us and without precedent; one decided whether a union of states could exist upon the northern hemisphere; the other must settle whether the varied interests of the world can be unified for the best advantages of us all. Although many will not agree, this compiler believes that the War Between the States was the most important conflict in which our country engaged prior to 1941. With French aid the American Revolution was assured of success. When the North and South became arrayed against each other, the fate of our Nation was in the balance, and only ourselves could tip the scales in the favor of one republic or a group of separate states such as has been extant in Europe for centuries.

Trouble had been brewing between the North and South over a long period before the outbreak of hostilities. For nearly half a century there had been peace in the land, if we except the Mexican War. The wastage of life and property that warfare entailed had been forgotten. The clash of ideas between the two sections on slavery, on agricultural production, on industry, worried the politicians and statesmen. The North depended on the South for its cotton and the rate of commerce was high. That the South would ever want to separate from its best customer was held improbable. That the smaller and less populous Southern States would secede because of their ideas was impossible. The South was equally certain that the North would not press their notions. Was it not dependent upon the production of the sections below the Mason and Dixon's Line for its

prosperity? The Yankees were "choked with cotton dust," they would not fight. But they did, and the war between the two came as a surprise to an unprepared people, the old, old story of America. Leaders in Congress and American affairs had endeavored to arouse both sides concerning the terrible event toward which they were tending, but as in our own generation, little heed was given to their words. When the Confederates fired on Fort Sumter and President Abraham Lincoln made his first call for troops, the whole western part of Pennsylvania possessed not one regiment ready among all its military forces, and most of the twelve counties to the northwest had not one full company in training. Practically all the military organizations had lapsed during the previous two decades.

In general the cause of the Civil War was economic; in particular, it was the question of the expansion and control of slavery. New England was the source of the abolitionist propaganda that spread all over the North. At the same time the majority of New Englanders were against war because it would ruin its textile industry. Northwestern Pennsylvania at that time was industrial only in forest products. It was predominantly agricultural in development, and its crops did not compete with cotton; indeed, its grains found a ready market in the South. The people were anti-slavery in sentiment, and at least two main routes of the famous "Underground Railroad" conveyed escaped slaves to Chautauqua County, New York, on their way to Canada.

To turn aside for a paragraph of two, let us summarize in a few words the progress of this war. Its fundamental source was in two radically opposed economic and social systems and two divergent interpretations of the Constitution. Slavery was but a contributing issue. The decisive factor was the attempt to form an independent government—The Confederacy. In December, 1860, South Carolina seceded from the Union, followed shortly by Mississippi, Alabama, Florida, Georgia, Texas, Virginia, North Carolina, Arkansas, Tennessee, and Louisiana. The first gun was fired on January 9, 1861, by batteries in Charleston Harbor, which drove back the steamer "Star of the West," bearing supplies to Fort Sumter. The actual outbreak of war, however, is dated from April 12, when Fort Sumter was bombarded. The first blood was shed in Baltimore on April 19 in a street attack on the 6th Massachusetts Regiment, which was on its way to Washington. Ten Philadelphia companies were with the 6th Regiment and lost three dead and twenty injured. Bull

Run (July 21, 1861) was the first great battle. It resulted in a severe defeat for the Union Army; its effect was to encourage the South and raise a determined spirit in the North and to unify both sections in support of their respective policies. The Mississippi River was opened to Union vessels by the capture of New Orleans in April, 1862, and of Vicksburg and Port Hudson in July, 1863. The latter month also saw the Union victory of Gettysburg, by which the Confederate attempt to carry the war into Pennsylvania was overthrown. From July, 1863, the final victory of the national cause was assured. Sherman's march to the sea in the latter part of 1864 cut through the heart of the Confederacy and did incalculable damage to the Southern cause. The vigorous blows that in 1864 and the spring of 1865 Grant dealt to Lee's army in Virginia brought the war to a conclusion. General Robert E. Lee surrendered at Appomattox Court House on April 9, 1865. Johnston's army surrendered on April 26, and within two months more all the Confederate forces had laid down their arms.

The results of the Civil War may be summed up as: the destruction of the right of secession; the abolition of slavery through Abraham Lincoln's Emancipation Proclamation (1865), and the adoption of the Thirteenth Amendment to the Constitution; discrediting the principle of nullification; economic exhaustion of the South and obliteration of "plantation aristocracy"; the expansion of the powers of the Congress and the President.

Pennsylvania was one of the states of outstanding importance in the war, not simply because of its size and population, but because it was a border State, despite the several neighbors on the south of doubtful loyalty. The tide of war swept into it as far as Gettysburg and some miles beyond. Great achievements were required of the Commonwealth over a period of four years, and it did not fail. No State was less prepared with munitions or trained militia, but no war governor acted more quickly when action became necessary than Andrew Gregg Curtin, of Pennsylvania. It is an almost forgotten incident that five Pennsylvania companies (530 men) were the first volunteers to arrive in Washington, April 18, 1861. They were officially thanked by Congress, and became known as the "First Defenders" of the National Capital.

On April 15, 1861, President Abraham Lincoln issued a proclamation calling for seventy-five thousand troops for three months' service. The Pennsylvania quota was fourteen regiments of one thousand men each. Within days there were enough volunteers in

Harrisburg to fill twenty-four regiments, and on April 18, Camp Curtin was established in the capital city. This was the first regular camp set up in the loyal states and from it were sent out twenty-five regiments during the first two weeks. Several of these were from western Pennsylvania, although one must keep in mind that Pittsburgh rapidly became a big recruiting center, as in the Mexican War, because the Civil War was not fought wholly in the East as many schoolboys have the impression. The second Presidential call for troops came on May third for fifty thousand troops. On July first it was for six hundred thousand for three years. On August 4, 1862, the demand was for three hundred thousand men for nine months; on October 16, 1863, the call was for three hundred thousand men, and once more on July 18, 1864, the request of the Union was for five hundred thousand men; and on December nineteenth of that year the call was for an additional three hundred thousand. After the fall of Richmond, recruiting was confined to one hundred-day volunteers.

There are various figures derived from the records, indicating the number of recruits, drafted men and substitutes that went from Pennsylvania into the Union forces between 1861 and 1865. The following probably approaches accuracy as regards totals: Including the militia called out in 1861 (25,000), there was a total of 387,284 sent to the army, with an additional navy complement that would bring the grand total up to 427,286. The first named formed parts, or the whole, of 270 regiments and a number of detached units. The population of the Commonwealth in 1860 was 2,906,215, according to the census of that year. That works out roughly twenty-eight per cent. under arms of its male population, old men and young, boys and boy babies, on the basis that males and females were equal. In that same year the population of the twelve counties of northwestern Pennsylvania was counted in round figures as 257,000. If they sent twenty-eight per cent. of their males to war, the contribution was 34,580. For reasons with which patriotism had nothing to do, the proportion of the population of this part of the State, and all states, included on official military and naval rolls, is not so large.

Statistics are misleading. It is probably true that there never was a conflict waged by our country, not even the Revolution, and certainly not the World War I, in which so large a proportion of its population participated, but it is equally true that the figures above quoted give a wrong impression because they do not take into account reenlistments for one thing. The writer knows of one man who enlisted nine times, only twice with the same unit. He does not sug-

gest that this was not an exception rather than the rule, but would like to intimate that not even at this late date is it known just how many different men from any county or State saw service in the Union forces.

Authorities still differ on this matter. They equally agree that only a small proportion of soldiers were drafted and few deserted, although many received bounties. In other words, northwestern Pennsylvania supplied a large number of volunteer recruits, particularly in the early stages of the Civil War. Deserters were not so vile as the name implies, for many a young fellow simply left one unit to join another, and married and single men frequently returned home to help in the harvest or save their family from hardships, and then went off to war again. There was little "desertion in the face of the enemy" in all parts of the Union. The bounty question is somewhat misunderstood. Business, at the beginning of the war, was in what is now called a "depression"; there were many unemployed who gladly volunteered. When the Union settled down to real fighting, business picked up, labor was in demand, and wages rose to heights, exactly the same conditions that existed before and during the First World War. An enlisted man in the Civil War received sixteen dollars a month; workmen at home made three or four times this sum. The need of the Union was great, but so was that of families. As a means of equalizing differences between the two, bounties were paid to volunteers, and State aid was given to the family deprived of its head and main support. The total expense to the counties was large, and was eventually paid by the State and Federal Government, to a sound extent.

Bates' "History of the Pennsylvania Volunteers" remains the best authority on the stories of the various regiments of the Commonwealth that participated in the Civil War. It is a voluminous and painstaking work, and handles a difficult subject exceedingly well, but not even the author claims to have found and furnished the complete details of Pennsylvania regiments and separate groups in the Civil War. Bates presents regimental sketches of Venango County units, comprising the 10th Regiment, 57th Regiment, 63d Regiment, 64th Regiment (4th Cavalry), 65th Regiment (5th Cavalry), 103d Regiment, 105th Regiment, 121st Regiment, 142d Regiment, 161st Regiment, and the Lamberton Guards. Venango County, in 1860, had a population of 25,043. Warren County, with a population of 19,190 in 1860, had large representations in the 39th Regiment (10th Reserve), 42d Regiment (Bucktail Rifles), 58th Regiment, 59th

Regiment, 111th Regiment, 113th Regiment, 145th Regiment, 151st Regiment, 159th Regiment, 182d Regiment, and soldiers in several other commands. Erie, largest in population of all the counties in the northwest, 49,432, probably had more soldiers in regiments from Pennsylvania, Ohio and elsewhere, than any other county in this area, and her losses by battle and disease were reputedly larger than any other. But most of the conclusions drawn from the official statistical records of the State and Federal Government and from Bates are conjectural. This compiler does not know of any regiment in the war that was wholly made up of citizens from only one county. Where



West Spring Street, Titusville

regiments have been named in the above, they are ones in which there were one or several companies recruited in a given county.

Regimental histories, of which there are a large number, together with their rosters of members, appeal to the children and grandchildren of former veterans of the Civil War, genealogists, writers of historical novels, and historians of that period. The records of these small military units reflect little light upon the whole internecine conflict, although some played spectacular rôles in battles of the Republic from Bull Run to Appomattox. They suffered enormous losses and returned to their original starting places with their wounded, crippled and ill, to become once more citizens of communities.

To single out a few regiments for more than passing notice in this chapter may be unfair, and seem to pay tribute to one section of northwestern Pennsylvania over another. With apologies, therefore, we relate what is known in newspaper parlance as a human interest story, a brief account of the 83d Regiment, Pennsylvania Volunteers, organized with John W. McLane as colonel; Strong Vincent, lieutenant-colonel; Dr. Louis Naghel, of Indiana, major. The companies were these: A, Titusville, Captain Morgan; B, Meadville, Captain Morris; C, Erie, Captain Graham; D, Edinboro, Captain Woodward; E, Waterford, Captain Campbell; F, Meadville, Captain McCoy; G, Tionesta, Captain Knox; H, Conneautville, Captain Carpenter; I, Erie, Captain Brown; K, Erie, Captain Austin.

Now the incongruous fact about this regiment is that although the organization of this unit was begun on July 24, 1861, and completed in five weeks, it had in it more than three hundred "veterans" of the Civil War, which actually began in April of that same year. How did it come about that there were veterans available who had been honorably discharged from full Civil War service? Just this way: When Fort Sumter was fired upon on April 12, 1861, it was realized that war was at hand. Public meetings were held, large funds subscribed, chiefly for the support of the families of those who would go to the front; and volunteers poured into the larger towns, Erie, Meadville, and others. The first company to offer its services from Erie was the "Perry Artillery Company"; but only days before the various "Guards," "Blues," "Grays," "Greens," social and military groups that had existed from as early as 1801. Erie established a camp and drill ground for what is generally known as the "Three Months Regiment." The unit quickly had more recruits than could be accepted, and by May first, left for Pittsburgh. Here there was further drilling and welding into a regiment. But before they ever got away from Pittsburgh, the terms of enlistment expired, and by July twentieth the men had been mustered out and returned to their homes. The disaster at Bull Run and other events made it clear to Washington and the Nation at large that this was not a three months' suppression of obstreperous minor elements in the South. President Lincoln's third call in that first year on July first was for three-year enlistments by six hundred thousand recruits.

As indicated, about a third of the thousand men in the 83d Regiment, Pennsylvania Volunteers, were veterans of the disbanded "Three Months Regiment." On September 8, 1861, it was taken into the Union forces. It would be pleasing to write that within a

month or two the regiment received its baptism of fire, but until the next June the tale is of changing military notions and practice, of misfit uniforms, inadequate equipment, hesitant policies, delayed action, on which it is not necessary to expand. The first hard fighting, and it was desperate, came on June 27, 1862, where losses of sixty-one were incurred. Then followed the 83d Regiment fighting in eight major battles of the war and an equal number of small engagements, wherein the number of those killed or who died from their wounds totaled 282. In making comparisons with the figures of World War I, do not overlook the fact that in the Civil War it was fatalities, not casualties, which received immediate publicity.

George L. Kilmer, in commenting on the high losses of the Civil War, said: "The Eighty-third Regiment, Pennsylvania Volunteers, lost more men numerically killed in battle, than any other regiment in the State; and stands second in the list for the highest losses in killed among all the Union Regiments." In placing the 83d second, Dr. Kilmer had in mind as first the 5th New Hampshire Regiment, whose report shows losses of 285 men. He overlooked the fact that the missing were included in the New Hampshire report, and the missing were not included in the Pennsylvania report of its 83d Regiment. Actually the known fatalities of the New Hampshire Regiment were 277, and that of the Pennsylvania Regiment 282, so that it was not second but first in the unenviable record of those slain in battle during the War Between the States. The official figures from the records in Washington of the 83d are: "Original muster, 1,000; total enrollment, 1,808; the killed, 282; died of diseases, accidents, etc., 153; officers killed, 11; officers who died of disease, etc., 2; total of killed and wounded, 971," or more than fifty-three per cent. of the total of those who served from first to last in its ranks.

It would make far less serious reading to relate something about the "Bucktail Rifles" and the old "Michigan" of the Lake Navy, during the Civil War, and possibly might present a better picture of the northwestern Pennsylvania of that period. The Bucktails were companies of the 42d Regiment, Pennsylvania Volunteers. Most of the counties proudly lay claim to this group, from Venango to Warren, and Forest, McKean and Elk. Lumbering was the big, almost the sole, non-agricultural industry of this section of the Commonwealth at that time, and shortly after the first call for troops made by President Lincoln, the lumbermen of the region decided to go to war, and they came in from the hills and streams, red flannel-shirted, bringing their own rifles, wearing in their caps the tail of a buck deer.

"On April 24, 1861, a hundred men had assembled at the rafting-place on the Sinnemahoning, where they at once began constructing their transports. Two days later the entire force, three hundred and fifteen strong, embarked upon three rafts, and with a green hickory pole surmounted by a bucktail for a flagstaff, the stars and stripes flying, and the martial strain of fife and drums echoing through the forests, they commenced the movement for the general camp of rendezvous at the State capital. Although authority had been given for recruiting this force, yet no order had been issued by the governor for marching, and before it had proceeded far it was found at headquarters that only a limited number could be accepted. A telegram was accordingly dispatched directing them to turn back upon their arrival at Lock Haven, but through the connivance of General Jackman, of the militia, who was very desirous that these hardy men of the forest should be received, the message was never delivered, and they were borne onward by the current over the broad bosom of the Susquehanna, and upon their arrival at Harrisburg saluted the city with a volley from their rifles."

The further history of the Bucktails must be investigated by the reader, with assurance that he will find it interesting and colorful. This much must be told: The lumberjacks had as much trouble in being accepted into a regular regiment as did the "Raftsmen Guards," coming mainly from headwaters of the Allegheny River, for the Pennsylvania capital city was swamped with volunteers during the first and second years of the war, and the military and civil authorities did not know how or where to place the recruits that poured in from the country and hill districts to the west. Thomas L. Kane, brother of Elisha Kent Kane, famous Arctic explorer already deceased from the hardships he had endured in the north, was the organizer of the two and other forest-hardened companies. After heart-breaking delays he was given official recognition, and made a great name for himself with the 42d Pennsylvania Regiment. The exploits of the Bucktails are honored traditions in northwestern Pennsylvania.

For years visitors to the city of Erie have seen, near the Perry Memorial Monument, a small iron naval vessel, the "Wolverine." Too few stop long enough to discover that this is the former U. S. S. "Michigan," unique in the history of our navy, and of world navies,

because she is the first iron ship of war ever to be built and, of course, the first iron hull to float upon the Great Lakes. Historically the "Michigan" or "Wolverine" was an experiment made possible by Congress on September 9, 1841, when \$100,000 was appropriated for an iron warship on Lake Erie. Its completion was delayed until 1844, because of difficulties in securing a trade treaty with Great Britain, but for eighty years she sailed the Great Lakes, the first of a new kind of battleship. During the Civil War the "Michigan" was used as a recruiting station and training ship at Erie City, but performed many other services, not the least of which was to protect itself from a supposed plot, hatched in Canada, to capture the little ship and thereby help free Confederate prisoners on Johnson Island, Sandusky, Ohio, and furnish Southern refugees in Canada with a means of terrorizing the whole lakes region. The "Michigan" hurried to Johnson Island and took a position that commanded the approaches to the harbor, and the plot failed to materialize. This warship, first of its kind in naval history, was exceptionally powerful for her time. Its armament consisted of fifteen guns—one sixty-eight pounder, smooth bore gun, mounted forward; six fifty-pound rifled "Parrotts" placed on the spar deck; six twenty-five pounder "Dahlgrens" aft on the quarter deck; and two twelve-pounder howitzers on the hurricane deck. Nothing afloat on the Great Lakes could make a stand against U. S. S. "Michigan," although, today, a modern destroyer could sink a dozen of her kind before breakfast.

The bloody tide of war eventually changed, as it must in one direction or another. Richmond was abandoned, Lee surrendered. News came by telegraph in the night; there was improved communication by then. People thronged the streets of their own particular town or village, and the word went from mouth to mouth, "The war is over." There were parading and celebrations the following day or two. There were bonfires and torches, still chiefly lighted by tallow candles, because the new-fangled kerosene was expensive even in a region which was to become the center of world petroleum production. As the summer went on, the local troops came home, leaving their dead behind them in Pennsylvania, Virginia and Georgia fields. Few arrived as regiments, coming mostly as scattered and shattered groups. They quickly resumed former occupations, for business was good, as it usually is immediately after the conclusion of a war. Taxes began to climb, for there were debts to be paid and delayed public construction to be undertaken, even the debts incurred in paying bounties to late year soldiers. Wonderful plans were made for

memorials to those who "had paid the final sacrifice," many of which were too long delayed and never dedicated, for the panics of a few years later brought burdens that made folk forget the Civil War, its costs in men and treasure. Gradually was forgotten what it had achieved, even its major contribution to the freedom of all mankind, the battle for which can never be finally won. Always, it seems, must the next generation fight anew for its liberties. Says a character in the Civil War novel "The Drums of Morning," by Philip Van Doren Stern:

"This war was more than an effort to abolish Negro slavery. The whole question of human liberty was bound up in it. And although we have won victory on the battlefield, we have finished only one phase in a greater struggle. The fight for freedom is an endless battle. Its victories are never final, its defeats are never permanent. Each generation must defend its heritage, for each seeming conquest gives rise to new forces that will attempt to substitute fresh means of oppression for the old. There can be no peace in a world of life and growth—every battle the fathers thought finished will have to be fought anew by their children if they wish to preserve and extend their freedom. We have won our war, but we shall have to begin training new fighters to carry on in our stead. Our work is finished, soon negro slavery will be extinct in this country. That phase of the battle is ended but tomorrow will bring us new tasks and new trials. God give us strength to meet them, for we shall need his help."

Underground Railway Activity—Natives of Rockland Township, Venango County, point out to visitors the barn which tradition reputes to have been part of the "underground railway" system through which slaves worked their way into freedom. This story seems to be well founded, but how many residents of the section knew that the Venango County Court handed in a decision on two slaves who demanded freedom years preceding the famous Dred Scott case? The incidents which led to the Dred Scott decision in 1857, occurred in 1834; in that same year a similar ruling was handed down here in our own courts. The presiding judge, while deploring the slave law, ruled slaves the personal property of their masters. And the fact that one of the pair under trial declared he had been freed by the will of a former owner, was disallowed because he lacked proof, although later developments proved that he was not making a false

claim. The slaves were held in the county jail over night, so that no one would try to steal them from their owners until they could return them to the South, although soon afterward the pair gained their liberty at Brookville. Their ultimate fate is not known. The story, as related in September 23, 1834, "Franklin Intelligencer," follows:

"SAVAGE BRUTALITY: In a late number, we published the proceedings, so far as they had progressed in the case of John Yates and Stephen Delgarn *vs.* Negro Charles and William (for it is denied they have any cognomen). We stated that the prosecution commenced on the 11th of August, on the respective oaths of John Yates and Stephen Delgarn, before one of the magistrates of this town. The colored men were arrested by the proper officers, and brought before His Honor, Judge Irvin, and claimed to be the property of the above John and Stephen, late of the county of Jefferson, State of Virginia, charged with being—men—No—Runaway Slaves. John and Stephen being unable at that time to prove that they had the power of life and death over these miserable men, at their request had the hearing postponed until the 12th, and the Negroes immured within the walls of one of the cells of our county prison.

"Our citizens in town and county manifested what we consider a correct feeling. Able counsel was not desired or bought with a price, but came forward voluntarily. On the 12th there was a full court, His Honor, Judge Shippen, was present. There was also a full bar, and a crowded court house; popular feeling, which was very much excited, had not subsided. Every heart beat with sympathy, and every bosom (with a very few exceptions, say five), heaved for liberty. The spirit of '76 evidently had done its office. The claim of the aforesaid John was the first heard; for the Negroes it must be recollected were passive in this matter, being mere personal property. Mr. McCalmont addressed the court, and pressed the facts in a manner calculated to touch every humane sensibility, and raise the exclamation, 'Oh death where is thy sting—Oh grave where is thy victory—Oh liberty whither are thou fled?' We can pass Mr. McCalmont no compliment that will do him justice for his unwearied exertions in behalf of liberty to the captive. The display of eloquence and pathos was truly admirable, as well as affecting to every heart, not alarmingly insensible to all human miseries.

"There was one point of law which the court differed with the counsel—upon which Mr. McCalmont dwelt long. But alas, all was in vain. The counsel for John then commenced his argument, but the judge having made up his mind on the whole case, proceeded to declare his determination on the law and facts, as they appeared to him, in a very clear and satisfactory manner, at least to us. He commenced by showing that we were bound by the Constitution of the United States, and without sacrifice by some and concession by others, in all probability, there would never have been a union of States; and that slavery was lawful in some of the States; that Virginia was one of those States, and that by the constitution and laws of that State slaves were personal property. His Honor had nerve enough to declare what he considered the stern demands of an unholy law; showed what he felt as a man from the Bench, not as a Judge. As a humane man he entreated John Yates 'in wrath' to 'remember mercy,' and not inflict cruelties upon the poor defenseless slave, which this devoted (white) man agreed to.

"Stephen Delgarn then proceeded to make out his claim to Negro William, as his slave. The Negro alleged (by his counsel) that he had been set free by the will of a former master or mistress, in Gloucester County, State of Virginia, but he was unable to prove it, and offered to make oath of the facts; however the court appeared satisfied that he was the identical Negro slave of Stephen, ordered him into custody; counsel were not heard in this case, it appearing too clear to admit argument. The slaves were put into jail and clad in irons from hand to foot. In this miserable condition they remained until their masters' will should be more fully made known to them.

"Since the hearing a letter has been received from the Register of Wills of the County of Gloucester, Virginia, corroborating the facts of William's manumission by will as stated by him.

"In the discretion of Yates and Delgarn, it was best to leave the borough of Franklin under the clouds of night. Accordingly about 2 o'clock on Sunday morning, the stage and caravan arrived at the jail door to take in the freight.

"Since the above was in type, we learn that Charles and William, who had been confined in the Brookville jail on their

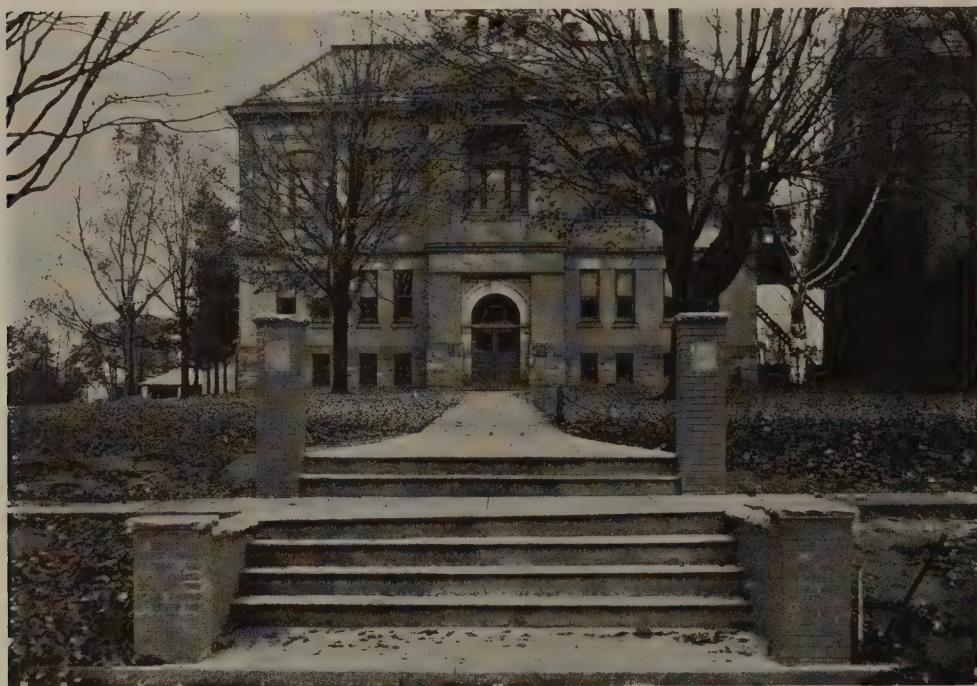
way home, for safe keeping over night, have, by some hocus pocus or other, found their way out and bid their would-be owners good-night, took to the scrapers and are OPH, perhaps, forever."

Dred Scott's owner, an army officer, took him into a State where slavery was forbidden by the Missouri Compromise. After returning to Missouri, a slave State, Scott sought his freedom, which was granted in 1848 by the court of St. Louis County. The State Supreme Court reversed the decision and was upheld by the United States Supreme Court, which ruled slaves merely chattel which a citizen had the right to take anywhere.

War with Spain (April 25-December 10, 1898)—A new period in American history was begun with the Spanish-American War. The United States, after more than a century of isolation, emerged to become a world power. Expansion, imperialism, colonial possessions, dominion over subject territory, the right of self-government, these and related words and phrases were added to the Nation's vocabulary, and were much used until a greater conflict pushed them into the background. The war had been years in the making. Cuba, but a few miles off our southern coast, had become something more than a Spanish possession. It was a neighbor with whom each year brought closer relations. There were things produced there that the United States could use, and our country manufactured articles which the islanders needed. Commerce was not the only tie, however, nor were dollars the only interest involved. Cuba was being exploited to the destruction of its resources and peoples under a contemptuous and vile Spanish rule; her groans under the oppressive burden of that rule reached sympathetic ears in this country; her efforts towards some measure of liberation had many well-wishers in the states and were sometimes given unneutral and illegal aid. When the Spanish Governor-General Weyler issued his reconcentrado proclamation which ordered the gathering of all the country people of the island in the towns, where they were herded behind fences like cattle without care given them such as would be given the poorest of stock animals, the outrage created a flaming demand in America for intervention.

Business and conservative elements felt that intervention was too drastic a measure to be taken. President William McKinley desired above all things to avert war. He investigated the possibilities of buying Cuba, only to find that "Spain would never sell the

brightest jewel in her crown." The average citizen favored intervention without realizing what it would mean. The sensational papers were all for war. The blowing up of the battleship "Maine" on February 15, 1898, with the loss of 266 men, ended American neutrality. The demand for war grew increasingly louder as the country waited forty days for a court of inquiry to place the responsibility for the disaster. This court never reported as to the agency, but said that the means was an external force, probably a mine. Con-



(Courtesy of "Jeffersonian Democrat," Brookville)

Paul Darling Memorial Hall, Central School Building, Brookville

gress definitely laid the blame for the destruction of the "Maine" at Spain's door, declared "that the people of Cuba are and of right ought to be free and independent," and that the United States forces should give aid if necessary in the acquirement of such freedom. On April 23, 1898, a state of war was declared to exist between Spain and this country.

Commodore George Dewey, commanding the Asiatic squadron of the United States Navy, left Hong Kong for Manila, where he arrived May first. He met the Spanish fleet under the command of Admiral Montojo and completely destroyed it, although he himself

suffered the loss of neither a ship nor man. A Spanish fleet commanded by Admiral Cervera took possession of Santiago Harbor, whereupon United States Rear-Admiral Sampson, with the aid of Commodore W. S. Schley, proceeded to block it (June 1-3). Subsequently two Spanish-American conflicts took place on land near Santiago, on June twenty-fourth and July first; and in both the American forces under Major-General Shafter were victorious. In the latter battle the Rough Riders under Lieutenant-Colonel Theodore Roosevelt aided the regular army.

On July third, Admiral Cervera's Spanish fleet attempted to break the harbor blockade and was pursued by American vessels "Brooklyn," "Oregon," "Iowa," "Texas," and the yacht "Gloucester." The Spanish ships "Maria Teresa," "Almirante Oquendo" and "Vizcaya," driven ashore, promptly surrendered; the "Cristobal Colon" was forced ashore and sunk; the torpedo destroyers, "Furor" and "Pluton," were wrecked near the harbor. Only one American was lost.

General Toral's surrender to General Shafter on July seventeenth gave to the American forces the city and province of Santiago de Cuba, while General Miles' campaign in Puerto Rico brought about complete possession of the island before the end of July. The Philippine Islands were captured in August. The American troops, commanded by General Merritt and aided by Admiral Dewey's fleet, August thirteenth, captured Manila and seven thousand prisoners.

Meanwhile a peace protocol had been signed at Washington, District of Columbia, August twelfth. Peace representatives of the two nations convened at Paris, October first, and the treaty was signed December 10, 1898. The conflict, which had lasted less than four months of armed war, deprived Spain of any possessions in the western hemisphere. American casualties totaled 279 soldiers killed, 1,465 wounded, and 16 sailors killed and 68 wounded. By the treaty, the Philippines, Puerto Rico and Guam were ceded to the United States in exchange for the payment of \$20,000,000, and Cuba was proclaimed an independent territory under United States protection.

A chronology of the events of a war, and some attempt at explaining motives and causes, may be useful and necessary as a background, but fails to indicate the local aspects of military affairs. In north-western Pennsylvania it is but human to be more interested in the fact that the 16th National Guard Regiment, many of whose members came from Venango County, was the only organization in Pennsylvania, and probably in the United States, that responded to the first

call for troops, "to the man and with a full quota of officers," than that many regiments in the Nation appeared in appointed camps with less than ten per cent. of their technical strength. The citizen of Erie County is proud that Erie is the last resting place of Captain Charles V. Gridley, in command of the "Olympia," flagship of Commodore Dewey, at the battle of Manila, who so strenuously carried out the order, "Fire when ready, Gridley," that he never recovered from the terrific concussions of that firing and died in Kobe, Japan, before he could be returned to the United States. His body lies buried in Lakeside Cemetery, Erie, by the side of his own son, John P. Vincent Gridley, captain in the Marines and a casualty while aboard the "Missouri." It is pleasant to recite the record of the 15th Regiment, with its companies from five western Pennsylvania counties, or of the 10th Regiment, the most famous of Commonwealth units, but not so enjoyable to have to write of the latter regiment that while only sixteen died in action or as a result of wounds, its fatalities from disease alone were 226. However great the pleasure of compiling local history, there is always the difficulty of steering one's way between the factual and the personal. More and more have our wars submerged the individual and even places.

Pennsylvania as ever, when the tocsin of battle sounded in the Republic, marshalled its troops for war against Spain. It had been one of the foremost states in developing militia, or National Guard organizations. Daniel H. Hastings was Governor in 1898 and after consultations with Russell A. Alger, Secretary of War, at Washington, on April twenty-third, gave this picture of the situation in the Commonwealth:

"Your telegram of this date calling for ten regiments of infantry and four batteries of artillery just received. The call will be obeyed promptly. Our troops will be mobilized at Mt. Gretna, twenty miles from Harrisburg, on Thursday next. We have 300,000 rounds of ammunition, 45 calibre Springfield rifles, model 1884; 7,500 Springfield rifles, calibre 45; 360 carbines, 6 3.2 breech-loading steel guns, 8,500 woolen blankets, 3,000 common tents, 350 wall tents, 150 hospital tents, 8,000 each of haversacks, canteens, and blanket bags. Three troops of cavalry, 60 men each, fully equipped. Three light batteries, 76 men each, fully equipped with two breech-loading guns to each battery. Troops ready for muster as soon as mobilized. Will advise you more definitely later."

On Thursday, April twenty-eighth, the entire division of the Pennsylvania National Guard reported at Mount Gretna, in a most severe snowstorm, which was followed by rain and sleet. The camp was called "Camp Hastings." These and later outfits were mustered into the United States service, but few were sent out of our country, the exceptions being that the 4th and 16th Regiments of Infantry, Pennsylvania City Troops, Governor's Troop, Sheridan's Troop of Cavalry, and Batteries A, B and C of the Light Artillery, served in Puerto Rico, and that the 10th Regiment assisted in the capture of Manila, and afterwards was used in putting down the insurrection of the natives.

To quote Godcharles' "Pennsylvania":

"The 1st, 3d, 5th, and 9th regiments entrained for Chickamauga Park, Georgia; the 3d was later ordered to Tampa, Florida. The 2d Regiment was detailed for guard duty, while the 6th, 8th, 12th and 13th were ordered to Falls Church, Virginia, where they helped establish Camp Alger. The 14th Regiment was divided, part being sent to Fort Mott, New Jersey, and the remainder to Fort Delaware, Delaware. The 15th was also broken up as a regiment, two companies going to Fort Washington, Maryland, and the remainder to Sheridan Point, Virginia. Company F, of the 18th, was sent to guard the Morgan Iron Company, at Alliance, Ohio; Companies D, E, and H to Fort Brady, Michigan, and the balance to Battery Point, Delaware. The 1st afterward served at Camp John S. Poland, Knoxville, Tennessee; the 3d was later ordered to Tampa, Florida; also served at Fernandina, Florida, and at Camp Wheeler, Huntsville, Alabama; the 5th and 9th regiments also served at Camp Meade, Middletown, Pennsylvania; and the 13th performed its last service at Camp MacKenzie, near Augusta, Georgia. These three regiments were known as the 'Pennsylvania Brigade,' and under command of Brigadier General John P. S. Gobin, of Lebanon, became the 3d Brigade, 1st Division of the 2d Army Corps. Captain A. Wilson Norris, of Harrisburg, served as assistant adjutant general."

One of the bitterest memories of the people of northwestern Pennsylvania, as well as all parts of the United States, is that our troops were so often sent to the front armed with the old Springfield rifle,

whose black smoke, every time an infantryman shot this weapon, exposed his whole regiment to a foe who used smokeless powder. Our men suffered either unnecessary casualties or had to be withdrawn, no matter how skilled their marksmanship, personal courage, or eagerness to drive the Spanish from their strongholds. Even worse were the casualties, right in local United States camps, from inadequate sanitation, bad food and bewildered leadership at the top. Typhoid fever caused far more deaths than warfare, something that could not happen now. War seems to bring some new disease that has not been conquered, such as the influenza during the First World War. During the Spanish War, thousands of our youngest and best men were robbed by disease of the glory—if there be any glory—of dying for their country on a battle front that extended half way around the globe.

The 15th Regiment has been mentioned. It was composed of eight companies from Erie, Crawford, Mercer, Clarion and Butler counties: Company A, from Erie; Company B, from Meadville; Company C, from Erie; Company D, from Clarion; Company E, from Butler; Company F, from Grove City; Company G, from Sharon; Company K, from Greenville. The command remained at Mount Gretna, where it arrived on April twenty-seventh amidst snow and sleet, and tried to live in over-age tents until this proved impossible. Later it was, in the main, assigned to various Virginia and Maryland camps, but through no fault of its own, never took part in West Indian or other campaigns. It drilled and drilled until it marched in the grand Peace Jubilee, at Philadelphia, October 27, 1898.

The 16th Regiment has been named as the only regiment in Pennsylvania, and probably in the Nation, which responded to the man with a full quota of officers. Its preparedness and patriotism received a partial reward. Writing almost verbatim from Charles A. Babcock's "Venango County": After a short time in Florida, the Sixteenth was chosen with two others out of an army corps of fifty-eight thousand men to advance upon Puerto Rico. Major Reed meanwhile, and Lieutenant-Colonel Richards, had been ordered to recruit men for the service and were eminently successful in that work. On July twenty-first the regiment sailed from Charleston under sealed orders. The designation was Fajardo. On arriving and finding no fleet there, the men proceeded to search the coast for General Wilson, who had sailed a day ahead. They found him and the fleet at Ponce, which city was then in the possession of the United

States troops. The regiment moved forward under orders and found the Spanish hastening their departure, and the people generally glad to welcome the soldiers. But this condition was not continuous, and the troops advanced amid difficulties which tried them sorely at times. The country was entirely unknown to the men, and was not a picnic at that time. The men from Venango County were equal to the occasion. Their courage and determination and skill in mastering problems have been admired and praised by historians, and by military men of long and varied experience. The battle of Coamo, in which so many Company D and Company F men took part, was one of the striking and spectacular engagements of the Spanish-American War.

Lest we do an injustice, let it be recalled that in May, Pennsylvania was allotted more than four thousand men in the second call of the President, and at that time companies were accepted from Clearfield, Punxsutawney, and two other western Pennsylvania localities.

It has been written of the 10th Regiment, that it "saw the most active service, suffered the greatest losses and remained on the field much longer than any other organization from Pennsylvania." As early as May 18, 1898, it was ordered to the Philippines, and sailed to the Islands on June fourteenth, from San Francisco, California. Before the Tenth left the Pacific Coast it had accumulated recruits from many parts of Pennsylvania. The regiment met its first test six miles from Manila, losing nine killed and thirty-nine wounded. Its service in the Philippines covered seventy days to the fall of the capital, which it then occupied, and on July first was embarked for the United States. When the "Fighting Tenth" arrived at Pittsburgh, August twenty-eighth, it received a tremendous ovation, and a celebration where President William McKinley was but one of the notables present. In retrospect, the Spanish-American War seems to have been a small affair, and in point of length and battle losses, this is true. It was a test of our volunteer military system, and if there was any failure it cannot be blamed on the so-called "militia." Whether it taught lessons of value in another war, two decades later, is still a matter of debate. It is believed, however, that the possessions acquired from the Spanish, and our responsibilities in this connection, did teach our government something about world politics and international understanding. Certainly our treatment of conquered peoples impressed the world, and may have laid the foundations of mutual faith and coöperation.

World War I (1914-1918)—The United States became involved in this conflict April 6, 1917, and contributed importantly to its end

on November 11, 1918. Twenty-nine nations (the Allies) were pitted against four—Germany, Austria, Turkey and Bulgaria (the Central Powers). World War I took a toll in human lives unequalled by any prior war upon the globe, Germany and Russia suffering the most in proportion to populations. Of the 42,414,810 men mobilized by the Allies, 4,669,087 were either killed in action or died from other causes; 12,826,778 were wounded, and 4,121,116 were missing or taken prisoner. Total casualties, 21,646,981 or 50.9 per cent. of mobilization. The Central Powers mobilized 22,850,000 men, of whom 2,750,000 were killed or died; 8,388,448 were wounded, and 3,629,829 were missing or taken prisoner. Total casualties, 14,768,277, or 66.9 per cent. of mobilization. As this is being written the United States has been drawn once more into a maelstrom of death and destruction, and for longer than half the number of months we worked at home and fought overseas a quarter of a century ago, America has girded herself for war all over the globe and still remains on the defensive.

The author does not have the temerity to write a history of World War I, either in its international aspect, or as it touched the lives of even some town in northwestern Pennsylvania. Thus far there have been few men who have succeeded in getting one small bite from the immense global affair. There have been many who have made a book about a regiment, a company, or the war activities of a village. There is no lack of historical material, although authoritative facts and figures are still being accumulated in the Federal and State archives. There are commissions which were appointed within months after our armies were dissolved, whose work has not yet been done. All this provides no reason for avoiding the task of sorting out some general material concerning the First World War, national and State, rather than foreign, especially such matters as will supply bases of comparison between our present endeavors and those of a generation ago. There are numerous likenesses and differences.

As usual the United States became engaged in this war before it was ready to fight—almost before it knew it was on the verge of war. Two years and a half of the most awful strife that the world had ever seen, while it had aroused our interest and sympathies, had, as yet, failed to convince the average citizen that we, inevitably, not only must lend a hand, but would be compelled to devote every energy to the ending of that strife. And this not from large-hearted humanitarian motives, but for self-protection. It was realized that a great fire was sweeping through the nations of Europe, leaving the most

complete destruction in its wake. But that it could destroy our house was thought to be impossible. We were too rich and strong, too isolated, had too much common sense to be drawn into a free-for-all



Air View of Franklin

mêlée, or to be made to suffer later for having failed to do so. No country would ever dare to attack us. True we had been having a lot of trouble with the belligerents. They were constantly treading on our toes; both England and Germany seemed inclined to disre-

gard our flag upon the seas; commerce had suffered; American citizens had been slain. But it was felt that no country really intended to offend us, and that once we could get the ears of those who had injured us unwittingly, they would immediately listen to reason, apologize, and make amends. President Woodrow Wilson had been sending notes abroad which, it was believed, or hoped, would straighten out our tangled international affairs and leave us free to become the unbiased arbitrator in the peace negotiations which would follow the cessation of hostilities. Meanwhile, we read the papers, argued belligerently, worked as we had not for years to create and send abroad the "sinews of war," and reëlected a President because he had "kept us out of war." When through a kaleidoscopic series of events it was suddenly borne in upon the Nation that no longer could America refrain from taking a hand, that no longer could neutrality be preserved in such a cataclysm as had overtaken the world, that our interests, culture, and humanity were inextricably intertangled with those of Europe; amazed that such a thing could be, practically unprepared even after years—the United States determined to intervene and war was declared.

President Woodrow Wilson called Congress together in a special session on April second and "urged it to accept the state of war which the action of Germany had thrust upon the United States." The response of Congress was prompt and nearly unanimous; and on April sixth the President issued the proclamation of war. His position was strong, for he had waited long and hopefully for a way out. President Wilson disclaimed any desire on the part of our country for conquest or dominion. "We fight for democracy . . . for the rights and liberties of small peoples. . . . The world must be made safe for democracy." As ever, the United States was embarked unprepared upon a war, without an army of size, and this time against foes three thousand miles away. It was upon these facts and known conditions that Germany based its expectation of bringing the submarine war to a successful conclusion before America could bring effective aid to the Allies. It was not believed possible for this country in less than a year, to raise, train, equip, and transport to Europe, an army large enough to seriously affect the fortunes of war. Germany said: "America is money mad and cannot fight."

Upon the entry of the United States into the war, there began a contest the like of which had never before been seen—nothing more than a race between America to send reënforcements to the failing Allies before the German submarines eliminated England from the

war, and the Teuton armies overran Europe as victors. America must not only prepare for war, but wage it while making its preparations. Russia collapsed, releasing a horde of soldiers for use on the western front; Italy made a disastrous retreat; the Allies were about exhausted. Could the United States help efficiently before it was too late?—that was the question which all the world asked. The Germans said "No"; the Allies were inclined to believe this was the answer. The United States prepared on the theory "that modern warfare demands all the efforts of all the people, both military and civilian; and that the judgment of experts was to be followed as far as possible, thus avoiding the worst mistakes of the Civil War and the War with Spain." The army act of May 18, 1917, was based on these principles. It provided for a regular army of 237,000; the taking into Federal service of the state militia units; and the drafting of an army of one million. In June, ten million men, between the ages of twenty-one to thirty, registered. By a lottery system, 1,374,000 names were drawn, and the men thus indicated were examined for fitness for military service, and by September the first contingents were entering the camps, sixteen in number, being built to receive them; a like number of cantonments were in the course of erection for the "National Army" or conscripted troops. The civilian population was, meanwhile, being organized in a hundred forms to give aid in every way conceivable.

Preparation was not enough. The Allies were "bleeding to death; Germany was winning; the morale of the French was running out like water through a sieve." Men must be sent to their aid at once or all was lost. It was urged that a few must cross the water immediately, if only to hearten those who were bearing the brunt of the fight. Before we were ready, therefore, General John J. Pershing and the American Expeditionary Force—The "A. E. F."—was sent overseas. On May 28, 1917, General Pershing set sail. In June a division of the regular army embarked, to be followed almost immediately by the Yankee Division. General Pershing cabled on July sixth that plans must be made to send at least one million men across before May, 1918. To create a force of a million soldiers, and to send them three thousand miles over a submarine infested sea in ten months seemed an impossible task. How well this was accomplished, the whole world knows; all in all, two million men were sent abroad within fifteen months. The first American troops reached France on June twenty-fifth. The first American shots from European trenches were fired on October twenty-seventh, and the first trench fighting of

Americans occurred a week later. By December, 1917, a quarter of a million American troops had been landed in France, and in January, 1918, the War Department let it be known that soldiers from the United States were occupying front-line trenches "in a certain sector." So much for the immediate reply of our country to the call for aid by the army.

The navy was in a better position to be of immediate use. Rear Admiral W. S. Sims was already in England, and within a few days after our declaration of war, made plans for naval participation in the efforts being made to overcome the submarine danger. Six destroyers arrived at Queenstown, Ireland, on May fourth, under Commander Taussig. The tale is told that when the flotilla arrived, the commander was asked: "When will you be ready to go to sea?" "We are ready now, sir," was the prompt reply, "that is, as soon as we finish refueling." Before the end of the war five thousand officers and seventy thousand enlisted men were serving in our navy abroad. The total personnel of the navy expanded during the war period from four thousand eight hundred officers and one hundred and two thousand men to twenty thousand six hundred officers and three hundred thirty thousand men. A great fleet was also accumulated. By the first anniversary of our entrance into the war, the United States had put into commission 1,275 vessels of all sorts; and before the end the number of vessels had risen to 2,003, and the personnel to four hundred ninety-seven thousand. A bridge was maintained between the United States and Europe over which passed in almost complete safety two million soldiers, about half of whom were transported in English ships, but guarded by American cruisers and destroyers. The immense number of cargoes of supplies were carried for the most part in American bottoms, which made up a huge fleet, and involving the use of five thousand officers and twenty thousand enlisted men. These quoted figures touch but the hem of the naval program.

As regards the contribution of Pennsylvania to the military and naval strength of the American forces, it is usually reckoned as almost four hundred thousand men and women in all services. On April 1, 1925, Adjutant-General F. D. Beary gave to the public the following statistics: Total number in service—army, 324,290; navy and marines, 45,927; coast guard, etc., 745; total, 370,962. This was 7.79 per cent. of the whole armed forces of the United States. Casualties—death from all causes—army officers, 412; enlisted men, 9,837; nurses, 29; a total of 10,278. The fatalities in the navy,

coast guard and marines, were estimated at about one thousand. Wounded, army only, officers, 810; enlisted men, 25,442; total, 26,252. Prisoners of war, army only, officers, 30; enlisted men, 805; total, 835.

Compare with the above figures quoted from the records in 1932, by Frederic A. Godcharles, Litt. D., noted Pennsylvania historian:

NUMBER OF PENNSYLVANIANS IN THE WORLD WAR

U. S. ARMY

White Officers	16,174
Colored Officers	65
White Enlisted	297,425
Colored Enlisted	15,100
Nurses	2,300
Total	331,064

U. S. NAVY

Officers Navy, Regular and Temporary.....	1,206
Male Enlisted	16,139
Female Enlisted	60
Officers Naval Reserve Force.....	2,304
U. S. N. Reserve Force, Male	20,305
U. S. N. Reserve Force, Female	1,067
Total	41,081

U. S. MARINES

Officers	257
Enlisted	6,116
Total	6,373

WITH ALLIES

British	1,397
Canadian	1,885
French	157
Czecho-Slovak	17
Belgian	14
Italian	4
Polish	17
Russian	1
Total	3,492

PENNSYLVANIANS WITH DIFFERENT BRANCHES OF SERVICE

U. S. Army	331,064
U. S. Navy	41,081

U. S. Marines	6,373
Allies	3,492

Grand Total	382,010
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TOTAL PENNSYLVANIANS WHO DIED IN THE WORLD WAR

Killed in Action.....	4,330
Died of Wounds	1,628
Died of Disease, A. E. F. and U. S.....	4,103
Died of Accident, A. E. F. and U. S.....	463
Died Other Causes, A. E. F. and U. S.....	106
Enlisted Navy	584
Officers Navy	63

Total	11,277
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From the same historian we reprint:

"Soon thereafter the United States entered the World War, when the entire strength of our National Guard proceeded to Georgia, where Camp Hancock was established, and the 28th, or 'Keystone' Division, was organized by Major General Charles M. Clement, of Sunbury, on August 25. The same day the 79th, or 'Lorraine' Division, was organized at Camp Meade, Maryland. This division was made up almost entirely of the selective service men of Central and Eastern Pennsylvania, Maryland and District of Columbia. The 313th Infantry was officered by Pennsylvanians, but the ranks were filled from Maryland and the District of Columbia. At the same time the 80th Division was organized at Petersburg, Virginia. It was composed of men from the selective service from Western Pennsylvania, Virginia, and West Virginia. Many of the units, however, such as the 313th and 315th Machine Gun Battalions, and 305th Engineers, and the Trains, were made up from Western Pennsylvania. The 92d, or 'Buffalo' Division, was composed of Negro troops from different states, many of whom were Pennsylvanians. The 42d, or 'Rainbow' Division, was made up of National Guard units from twenty-six different states, brought together for that purpose.

"The 42d Division arrived in France in November 1917; the 28th Division in May 1918, and the 79th and 80th divisions, in July 1918. Three of the nine divisions which were very much to the fore in the Meuse-Argonne Offensive contained many men from Pennsylvania. An explanation is no

doubt in order. After the Yankee Division was sent overseas, it became the policy of our war authorities to make up its Expeditionary Force from units drawn from all sections of the United States. Of the effects of this policy, and its beginning in fact, was the Rainbow Division, in which Pennsylvania soldiers were a group among many companies. Whether this was for the reason, as some insist, that headquarters wanted to prevent any one State or region from gaining too much glory, is doubtful. Rather it was to distribute losses more fairly, as army heads stated. At any rate, there were few divisions that did not have contingents from all over our country, when they arrived on the firing line. This policy worked hardship, especially among National Guard soldiers, who might be buddies today and just a stranger among other strangers when sent to a new camp for training. Unquestionably it made for the broadening of acquaintance with folk of all sorts and kinds in our Republic, but was disheartening to the initiates into the Army."

Although this is a story of World War I, without comprehensive descriptions of the personnel or history of any regiment, we must make an exception in taking from the General Orders of the War Department the following factual reports about the activities in 1918 of divisions that more than others had representatives from Pennsylvania:

BATTLE CREDITS OF 28TH DIVISION

General Order No. 3, War Department, January 30, 1923.

Chateau-Thierry, June 28-July 14	} Champagne.
Fismes, August 7-17	
Champagne-Marne, July 15-18—Champagne-Marne.	
Aisne-Marne, July 18-August 6—Aisne-Marne.	
Oise-Aisne, August 8-September 7—Oise-Aisne.	
Meuse-Argonne, September 26-October 10—Meuse-Argonne.	
Clermont, September 19-25	} Lorraine.
Thiacourt, October 17-November 11	

103D TRENCH MORTAR BATTERY, 107, 108 & 109 FIELD

ARTILLERY

Oise-Aisne, August 18-September 7—Oise-Aisne.
 Ypres-Lys, October 30-November 11—Ypres-Lys.
 Meuse-Argonne, September 26-October 10—Meuse-Argonne.
 Fismes, August 13-17—Champagne.
 Clermont, September 19-25—Lorraine.

79TH DIVISION

General Order No. 29, War Department, July 17, 1922.

Avocourt, September 13-25 }
 Troyon, October 8-25 } Lorraine.

Meuse-Argonne

September 26-October 3 }
 October 26-November 11 } Meuse-Argonne.

42D DIVISION

General Order 41, War Department, October 9, 1922.

Champagne-Marne, July 15-18—Champagne-Marne.

Aisne-Marne, July 25-August 6—Aisne-Marne.

St. Mihiel, September 12-16—St. Mihiel.

Meuse-Argonne, October 5-November 10—Meuse-Argonne.

Luneville, February 28-March 21 }
 Baccarat, April 23-May 13 } Lorraine.

Esperance-Sovain, July 5-14—Champagne.

Essey-Pannes, September 17-October 1—Lorraine.

The 149, 150 and 151 F. A., 117 Trench Mortar Battery, 117
 Ammunition Train had Vesle August 7-11—Champagne.

The history of any war is far more than a story of soldiery and the acts of governmental authorities. Behind both of these are the stay-at-homes, the citizenry who must support both government and soldiers. Theirs is not the danger and the horror of the battlefield, but their service is no less vital to success in war. The war with Spain made it quite evident that soldiers and ships were not all that were necessary for superiority in arms. World War I showed as never before that the winning of a conflict of nations was dependent upon the organizing abilities of a country, the ability of its peoples to get together in all things for the concentration and consecration of all resources, all manufacturing facilities, all human agencies in the will to win. America astonished herself and the world by the promptitude and skill with which her unprepared, unmartial citizens organized for war. It had been thought that only an autocracy or dictatorship could center a Nation's activity on military affairs. But it was soon proven, once the greatest republic in the world had decided to take a hand in quenching the conflagration which was spreading over the earth, that a people trained in the management of their own governmental affairs, could also do so in the exigencies of war. One of the marvels of World War I was the spontaneous growth of commissions, committees and organizations ready to take in hand the problem of the moment, solve it, and enforce, if necessary, the solution.

Possibly some future scientist or philosopher or historian will undertake to explain how a liberty-loving people for nearly three years could stand aside and watch the freedom of other peoples trodden under foot, and even their own liberties for that matter, and then burst into an almost ferocious support of war that nothing could slacken or stop. Civilian activities seemed to blaze forth all at the same time, whether these had to do with financing of the conflict, the initiation of organizations that would provide for all contingencies on both the home and foreign fronts, enormous increases of production in industries and upon the largest farm and smallest garden; the establishment of welfare agencies in our country and abroad; economies and sacrifices, and the coördination and utilization of the least and greatest powers of a united citizenry.

One does not know where to begin on the picture of our people in wartime, for each part is like a segment from a magnificent mosaic or a single feature of a bold landscape. And the painting might bear the title, "A United People at Work." The Pennsylvania Council of National Defense and Committee of Public Safety was the first overall practical effort of a thoroughly practical Commonwealth to organize its resources of men, material and food for war. Its scope was expanded afterwards to include almost every phase of State and individual activity not under the direction of some already established agency. It was a pioneer in its field, in its form, organization and plan for continuous development. George Wharton Pepper was State chairman, and similar committees were set up in every county. It was through these that most of the manifold civilian activities were promoted and sustained. The draft boards were among the first, and patriotic citizens attended to the duties of seeing that those called to arms received unbiased consideration and legal advice.

There was an infinite variety of committees, commissions, bureaus, societies, and the like, each established as a need developed. To the ears of everyone of mature age, and some youth, who lived through World War I, the sound is familiar of the Food Administration, and its famous boss, Herbert Hoover. For once in American history everybody learned things about foods that he never knew, to eat what he never had eaten, and to restrain his appetite whatever his wealth or social status. The Fuel Administration enforced savings of coal even in the mining localities of northwestern Pennsylvania, and its folk shivered a few times on "heatless days" when the thermometer registered below zero. The Liberty Loan drives, the Red Cross and other humanitarian agency drives were successful beyond human hope

or expectation. The industrial production of Pennsylvania deserves a chapter of its own, and its rehabilitation after the war was over was equally magnificent. Agriculture rose to unbelievable heights. The natural resources of Pennsylvania are great; the use made of them was greater.

Pennsylvania's war loans and war taxes in the two years of America's participation in the war were greater by about \$600,000,000 than the total cost of the North of financing the entire four years of the Civil War. The Union, between 1861-65, paid into the Treasury of the United States a total of \$667,163,247. Pennsylvania paid in taxes from 1917-19 a total of about \$1,150,000,000, or for 1917 alone, \$589,056,143.20. The North, from 1861-65, floated loans totaling \$2,621,916,786. Pennsylvania, with a population of eight million six hundred thousand, alone, subscribed for \$2,709,947,800 worth of Liberty and Victory Bonds, or \$88,031,014 more in bonds than the entire North did in the four years of the Civil War. The Liberty Bonds and War Savings Stamps were sold by banks, clubs, schools, churches, Boy Scouts (the Boy Scouts of Pennsylvania sold \$51,418,785 of the four Liberty Loans and \$4,000,000 of War Savings Stamps), Girl Scouts, women's organizations, etc. Do these last paragraphs recall a period of which we are proud—in retrospect; do they bring to the mind the problems and prospects of the present first year of World War II? In the words of a popular song, "We did it before and we can do it again."

This chapter was finished on Columbus Day, October 12, 1942. On that same evening President Franklin Delano Roosevelt brought to an end a fireside chat with the words:

"We are celebrating today the exploit of a bold and adventurous Italian—Christopher Columbus—who with the aid of Spain opened up a new world where freedom, tolerance and respect for human rights and dignity provided an asylum for the oppressed of the old world. Today the sons of the new world are fighting in lands far distant from their own America. They are fighting to save for all mankind, including ourselves, the principles which have flourished in this new world of freedom.

"We are mindful of the countless millions of people whose future liberty and whose very lives depend upon permanent victory for the United Nations. . . .

"But it is useless to win battles if the cause for which we fight these battles is lost. It is useless to win a war unless it stays won.

"We, therefore, fight for the restoration and perpetuation of faith and hope and peace throughout the world.

"The objective of today is clear and realistic. It is to destroy completely the military power of Germany, Italy and Japan to such good purpose that their threat against us and all the other United Nations cannot be revived a generation hence.

"We are united in seeking the kind of victory that will guarantee that our grandchildren can grow and, under God, may live their lives, free from the constant threat of invasion, destruction, slavery and violent death."

CHAPTER VI

The Early Industries

As the region developed through the sacrifices and the courageous efforts of the early settlers and the population increased, home manufacture and the few industries which had come into existence to meet the actual necessities of the people, such as gristmills, sawmills, etc., were succeeded by commercial industries, the earliest of which were the lumber, iron and tanning industries, with the continuance of the early trapping industry. The very extensive wild animal life of the region led to considerable trapping, which has always been extensively followed in the region and throughout the State generally, Pennsylvania leading all of the states in the number of farmer-trappers, stated as 148,900 in the report of the National Fur Tax Committee, May, 1935.

In his history of Erie County, John Elmer Reed says:

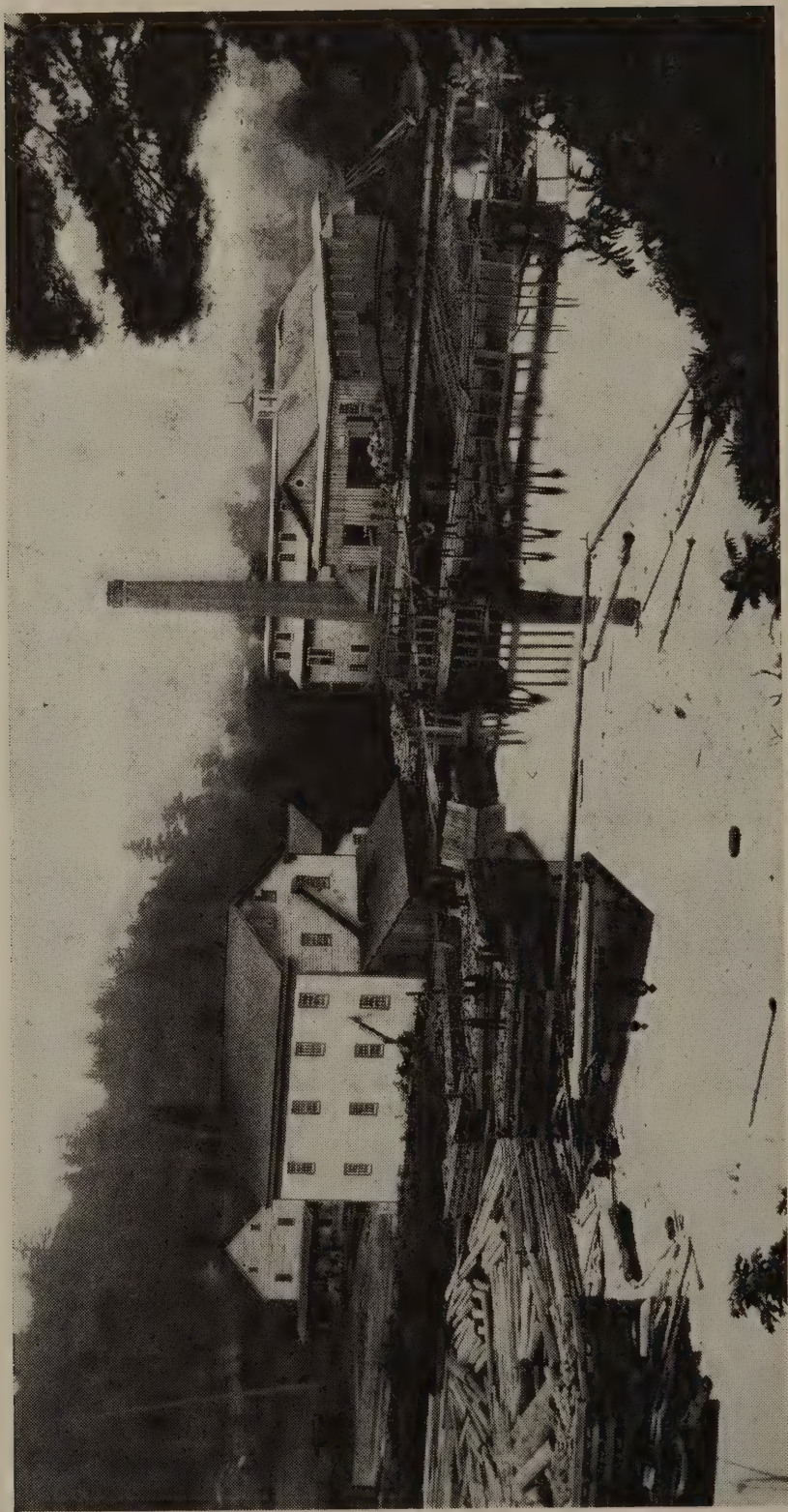
“Undoubtedly the first enterprise in the county of a manufacturing character, unless the French had done something in a desultory way, was the saw-mill constructed at the mouth of Millcreek, in the present city of Erie, by Captain Russell Bissell, of the United States Army, in 1796-97. He, with his soldiers, had been sent from Pittsburgh a year or so before to protect settlers and engineers seeking to open this county for settlement, but had been held at Waterford for some time on account of the active resentment of the Indians to having a settlement made on the shores of our bay. He had brought with him “the irons for a mill,” and used the little mill for sawing out lumber and timbers for the erection of dwellings, barracks, etc., on Garrison Hill for the use of the soldiers. This little mill no doubt gave name to the stream by the side of which it was built. It appears to have been operated until destroyed by fire in 1820. The dam which supplied it with power was on the creek above just about where Fourth Street

would cross it. Another mill was built on its site in 1831 by George W. Reed and William Himrod, timbers of which were still standing in 1860."

The second sawmill in Erie was built by John Cochran on the same stream, but much farther south, in 1800, where the old Densmore, or Eliot, mills stood later. In 1801 a gristmill was added to it, the whole being built of logs. John Teel reconstructed this mill by a regular frame in 1816, and it was operated thereafter by John Gray, his son James, Jonathan Baird, and John McClure. On the death of John Cochran, in May, 1836, his son, Robert Cochran, succeeded to its ownership, but sold it in 1845 to General Charles M. Reed, who, in turn, sold it to George A. Eliot. In 1850, Mr. Eliot turned it over to his son, John Eliot. Henry Shotwell bought it in March, 1871, who subsequently disposed of it to William Densmore.

A third sawmill in Erie was built by Robert Brotherton, in 1806, on Mill Creek, still farther up, where the later "Hopedale Mills" and the still later "Gingrich Mills" were situated, above the present Twenty-sixth Street. John Gingrich soon after purchased the farm and the mills upon it, but timber becoming scarce, the sawmill was shut down. An oil mill was built there by C. Siegel, and when John Gingrich died his son Henry came into the inheritance of it, and built the "Hopedale Flouring Mills" about 1850. Oliver & Bacon operated it for a time, but in 1865 Henry Gingrich resumed its operation.

A fourth mill on this same stream was put up by William Wallace and Thomas Forster, about 1807 or 1808, where the present Eighth Street crosses the old channel of the creek. About 1810 Rufus S. Reed bought it and added a gristmill below it. About 1822, a carding and fulling mill was added to these mills by George Moore, who had bought them. Along about 1834 or 1835, E. D. Gunnison bought these mills, and with his associate, Abraham Johnson, operated them under the name of "The Fairmount Mills," a name which is still remembered by some of the present time. Some time later Gunnison disposed of his interest in the business to John H. Walker, who turned the old carding and fulling mill into a plaster mill, built a number of dwellings for his workmen, and then put up a large tannery opposite the mills. The old vats of this tannery were uncovered about twenty-five years ago south of Eighth Street. The tannery was later burned. Liddell, Kepler & Company became owners of the mill, who, in the spring of 1859, disposed of it to



Humphrey Saw Mill, Port Barnett, in the 1880s
(Courtesy of "Jeffersonian Democrat," Brookville)

Phineas & O. E. Crouch, who operated the gristmills for many years.

A fifth mill was built by Rufus S. Reed on Parade Street, between Fourth and Fifth streets, in 1815. Its dam was just north of Sixth Street. He later added a distillery, and both were operated until his death. The old mill remained until well into the seventies.

Robert Large, in 1815, constructed a sixth mill for grinding purposes, near the corner of Eleventh and French streets, deriving its power from a dam built in Mill Creek above Twelfth Street. The gristmill not proving a success, he sold it to Alvah Flint, who turned it into a cloth mill, with carding and fulling facilities. This mill operated until 1840, when the water rights and mill site were purchased by Vincent, Himrod & Company, who established a foundry there, which later became known as The Erie City Iron Works. The place was disposed of when the iron company removed to the eastern part of the city, and became the site of the Ball Engine Works and Althof's Planing Mill. Both of these have long since been removed and mercantile establishments have taken their places.

Another gristmill was built by the McNairs on State Street just south of the New York Central tracks in 1827. Its power was derived from the waters of Ichabod Run, which came down into Mill Creek from the flats and bogs along the present Seventeenth Street. This mill soon quit business. The Erie City Mill was built by McSparren & Dunmars in 1849 near the same site, using the same water power; but was later moved to a point some distance south.

The Canal Mills, built by William Kelly, between Fifth and Sixth streets on the east side of Myrtle Street, were bought by Oliver & Bacon in 1865, which used for their power the surplus waters from the canal. They were operated by them for years, until converted into a factory for the manufacture of bicycles, which persisted for a short time, and went out of business entirely. The site of these mills is now built over with fine homes, and the old canal has long been but a memory.

Mills were built in other parts of the county by the pioneer settlers. As Mr. Reed states: "Mills sprang up in what we may now think were very strange places. But at the same time they were erected to supply a very real need."

In 1797 two sawmills were put up in the county, the one at the mouth of Walnut Creek by Thomas Forster, and the other on LeBoeuf Creek, close to where the station of the P. & E. R. R. was later built, by Robert Brotherton. Mr. Brotherton soon after, in 1802, added a gristmill to his plant. Mr. Reed states that these are considered to be the second and third sawmills to be built in the county.

The fourth sawmill in the county was built by Thomas Rees near the mouth of the Four-mile Creek in Harborcreek Township. It was for the use of the Pennsylvania Population Company in the better developing of their lands. Another sawmill was built in Greenfield Township on the waters of French Creek in 1799 by Leverett Bissell. A gristmill at the mouth of Walnut Creek, built by Thomas Forster in 1798, is believed to have been the first gristmill put up in Erie County.

In addition to the mills already mentioned, Mr. Reed lists thirty-seven grist or sawmills in Erie County erected previous to 1850.

In 1803 a combination saw and gristmill was built about a half mile up from the mouth of the Twelve-mile Creek, by Captain Daniel Dobbins and James Foulk; Mr. Neeley later secured it, and it was known as "Neeley's Mill," and from this mill was shipped from the mouth of the creek the first boatload of flour that went through the Erie Canal.

In 1803 a fulling mill at the mouth of Walnut Creek was in operation and, in 1810, a carding and woolen mill was operating in Harborcreek Township, where later Mr. Cass had a factory, south of Harborcreek village.

The first tannery in Erie was built near the beginning of the century by Ezekiel Dunning on Holland Street, between Fifth and Sixth, and was afterwards long known as Sterrett's tannery, operating until 1852.

A second tannery was built in 1805 by Samuel and Robert Hays on the corner of Ninth and French streets, and was operated there for years. William Arbuckle, who had learned the tanning business from the Hays people, opened a tannery on his own account on Eighth Street, just west of Myrtle Street, in 1820, which continued for about ten years.

John Glover started a fulling mill in 1830 on the northwest corner of Tenth and Myrtle streets, which also operated for about ten years.

In 1814 Thomas Miller erected a small mill on the stream which flows down into the lake along the western limits of Glenruahd, for the making of linseed oil. When ready to operate it was discovered that no one within convenient distance was raising flax in sufficient quantities to supply his needs and he converted it into a gristmill.

The Erie County Mills were built three miles south of the then Erie, using Mill Creek's waters for their power. They were built by Robert McCullough about 1802 for both sawing and grinding.

These mills were just south of the present Glenwood Park, where a busy little settlement found a place for itself at the bend of the Waterford Plank Road. A brickyard was later established near by for making brick from the shale rock which abounds there.

A foundry for iron goods was built by Philetus Glas on the east side of the mouth of the Sixteen-mile Creek in 1824.

In 1830 a small factory for manufacturing castings for plows, sawmill machinery, and low-priced stoves was established. This concern was the parent of several later concerns, and was located near the corner of Eleventh and State streets in Erie. Its foreman was John Hubbard, an Englishman, and for a time after he had taken charge of the furnace, it is related of him that he would summon the townspeople when his iron was melted and ready to run off by blowing a bugle, announcing the important event so that they could see the operation. No doubt this was as interesting a spectacle to the people of that time as was the shooting of an oil well in later years to others. This blast furnace only operated a few years, and in 1840 an iron foundry, machine shop, and boiler shop were established near Twelfth and State streets, out of which grew the Erie City Iron Works, one of the largest manufacturers of engines and boilers in the world.

Various persons became associated with the firm operating that Eleventh Street furnace, and its successors, amongst them being: Hinkley, Jarvis & Company, its founders; W. H. Johnson, James Sennett, Pardon Sennett, E. A. Lester, Walter Chester; Sennett & Company; Sennett, Barr & Company; Barr & Johnson; Barr, Johnson & Company; Johnson, Black & Company; Black & Germer; William Himrod, David Himrod, B. B. Vincent; Liddell, Hershey & Company (composed of Walter J. F. Hershey, Liddell, Benjamin Hershey and John Fairbairn); George Selden, and John H. Bliss.

This enterprise became styled "The Old Furnace," operating until 1840, when W. H. Johnson, withdrawing from the firm of Johnson, Sennett & Company, persuaded William Himrod, David Himrod and B. B. Vincent to associate themselves with him, and they established "The New Furnace Company" between Eleventh and Twelfth streets on State Street, the business being conducted under various names: Johnson, Himrod & Company; Vincent, Himrod & Company; Tibbals, Shirk & Whitehead; and lastly, the Chicago & Erie Stove Company, which later closed its career in the large stove works on the northwest corner of Twelfth and Sassafras streets.

It was, however, in 1864, when Messrs. George Selden and John H. Bliss bought the interest of Joseph McCarter in the older furnace enterprise, that a new concern was established, under the name of "The Erie City Iron Works," which shortly became well known in the manufacturing world for the quality and capacity of its engines and boilers. In his "History of Erie County," John Elmer Reed says:

"It was one of the engines made by this company which drilled the first oil well near Titusville for Colonel E. L. Drake; they erected the iron work and the stills for the first oil refinery, which was established at Corry; and the tall standpipe of the Erie Water Works Commissioners at the foot of Chestnut Street, was undertaken and successfully completed by this company. Its engines and boilers are in use in practically every country on the face of the earth; and through them the name 'Erie' has been well advertised."

From these small early beginnings, Erie County, and especially the city of Erie, has developed into a really great industrial area, the diversity of its important products to be related later.

The general character of the industries of any region are naturally greatly influenced by the natural resource reserves, climatic conditions, transportation facilities, and in the case of a newly settled region, the natural transportation facilities available within the region. Northwestern Pennsylvania was endowed by nature with dense forests and a remarkable abundance of water. The forests contained vast quantities of valuable timber and the streams, before the advent of the railroads, provided the means of transportation of the products of the forests.

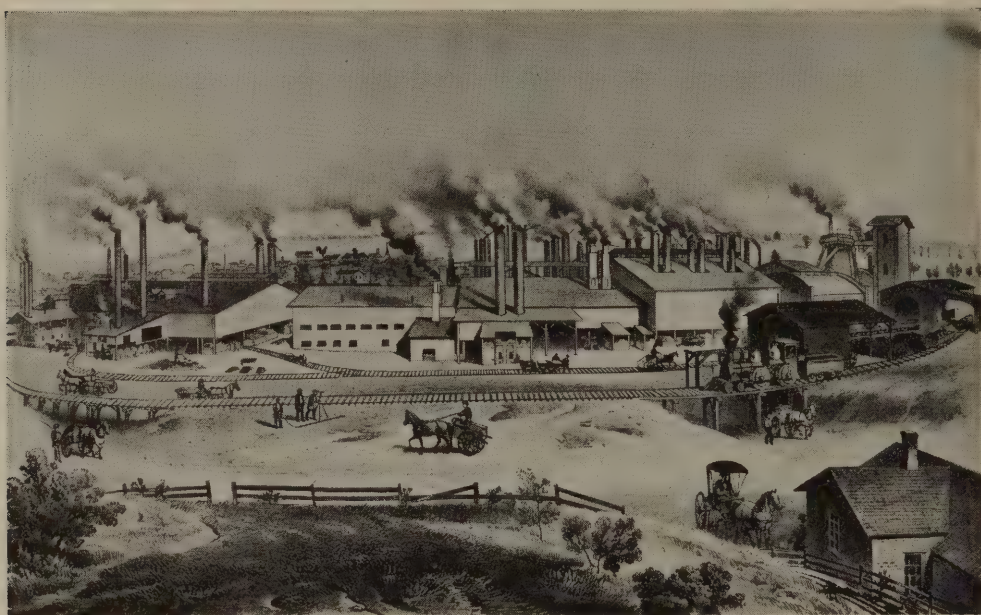
Therefore, timber, in the form of logs, was the most common article which the early settlers possessed to offer in the markets of the world in return for the many things they needed. During the winter months the axes filled the forests with echoes ceasing at intervals in spots till crackling branches and tremendous crash told that another choice pine or chestnut was started southward. These sounds rolled through the hollows, and along the answering hilltops, during the dark winter days; till under the bare branches the uneasy snow itself began to trickle toward the river. Then the axes were exchanged for handspikes and for rare canthooks, for these men were not well supplied with implements. The men were strong-handed, indomitable, and rich in neighbors for many miles around. All these made the

circuit of log gathering. There were sometimes oxen present, and perhaps a team of horses. At times, in the first arduous seasons, only the strength of men could be used; but somehow the logs arrived at the chosen spot on the river and were lashed into rafts by withes and pinned together by means of split planks crossing the logs. Some of the early writers, knowing how few the settlers were, and the scarcity of implements and power for handling such timbers, concluded that these logs must have been warped by the sun from the stumps to the river banks. This was not intended as a joke, but a statement showing simple inability to see how such a thinly settled region could float so many logs to market. But no unusual freak of nature was needed; nothing more mysterious than the wholesome spirit of brotherhood, which also settled in the region, was back of the many bundles of logs. The men of the countryside arranged to do certain things; they were therefore done. In this way many of tall straight pine trunks were floated to Pittsburgh, Cincinnati or Marietta from the counties of Warren, Forest, Venango, and Clarion, those from the latter county reaching the Allegheny *via* one of its tributaries, the Clarion River, during the opening of the new century to serve as masts for the keelboats which were building even then to take part in the growing commerce of the Mississippi, or the Gulf, or the Great Lakes.

The transportation of lumber, beginning thus early, was aided for many years by primitive watermills and single upright saws, driven by overshot wheels working only at certain stages of water, subject to suspension by ice, flood and drouth. A mill that would cut one hundred thousand feet per annum was considered a good investment. Floating sawed lumber to market in rafts was begun by many of the pioneers in 1801. For "snubbing" and tying up rafts halyards or cables made of hickory splint links were used for some years, the latter being manufactured by mechanics on the Hickory and the Allegheny. In 1805 a new branch of the business developed in the boating of seasoned lumber from the Brokenstraw and intermediate points in Venango County to New Orleans. The risks were great, but several trips were made in this and the following years and realized good profits, while a few sustained losses. Many became engaged in this branch of the business. Of the hands and pilots employed, Marcus Hulings and some others would return by sail vessel to Baltimore, and thence home on foot. "The Propers and some others" are mentioned in an old paper as having made the entire journey home from New Orleans a number of times by walking. The

best quality of lumber sold, delivered to this distant market, as high as forty dollars a thousand.

From the small beginnings, in remote coöperative neighborhoods, the manufacture and transportation of lumber under the management of the Holmans and others on the river, and numbers on the creeks, attained vast proportions. In the springtime "rises" these streams would be almost covered for miles with rafts. New towns had grown up—Louisville, St. Louis, Wheeling and other intermediate cities had opened their markets for lumber in addition to the increasing



Typical Shenango Valley Iron Works About 1880

demands of former markets. Reaction wheels, steam mills, circular and gang saws, replaced the overshot-wheel and solitary single saw, increasing the output from thousands of feet to millions annually. The business varied with the season of the year. In the middle of the winter or summer the region appeared to be very dull; but at the going out of the ice in spring and the subsequent floods, Franklin and the whole country above on Oil Creek, Hickory, French Creek, Hemlock and the Allegheny seemed to be alive with the bustle and preparation of the lumbermen. Large rafts followed one another in succession down the Allegheny. Smaller ones were coming down the creeks, and halting in the eddies, to be coupled into rafts of immense size, sixty-five to seventy-five feet wide, three hundred feet long, and

at least two to three feet thick, the boards or planks packed and bound together. Large boats, or "broadhorns," as they were called from the width of their oars, frequently accompanied the fleet. These carried special shipments of seasoned lumber, probably manufactured to answer requirements, as was the custom while this lumber trade was in its prosperous days. The rafts were also supplied with "broadhorns" at bow and stern. These were long, broad planks spiked to lengthy, stout poles at an angle, so that the oar when dipped into the water, would reach no deeper at the end than at the point next to the raft. The heavy craft, having only the speed of the current, could not be steered as a boat having propelling power could. So when a change from side to side of the current was necessary to safety, as was frequent, the mass of boards, enough to load a freight train or two, had to be pulled sidewise across the stream by vigorous working of the sweeps fore and aft, aided by unexpurgated streams of advice from the pilot. Like large floating islands was the appearance of these strange craft as they were guided down the difficult passages of the river by their noisy crews. The pilots had to be skillful, quick to meet emergencies; and with a knowledge of the river's bottom from experience, and even from the appearance of the water, that looked like witchery. "A good pilot sees the bed through the swiftest, muddiest water." The high flatboats and rafts were not only articles of commerce at their destination, but they were the common carriers of much merchandise besides. Many articles which the colonists expected to turn into ready money floated on the river to Pittsburgh and intermediate points to New Orleans. Frequently their delivery was expected from year to year by purchasers down stream. There was buckwheat flour, "best in the country," then as since. Maple sugar had always a quick sale, and was plentiful with the settlers. Furs and peltries, smoked hams, pork or venison and dried or jerked meats also went in this manner, and sometimes, when a careful housewife or two were aboard, as they sometimes were—to care for the purse and supply household needs—there were homespun linen white as snow, and butter from some noted maker, very pleasing to southwestern palates, and other domestic articles for which the women had ready customers.

Up some of the creeks the waters were sometimes too shallow to allow the floating of the lumber collected at the mills along their courses down to the river. This was true to a great extent of Oil Creek, for its stream was shallow, owing to its quick down grade. At the headwaters of this stream there was considerable lumber for

many years, ready for the spring drives. Rarely would the water in the stream be sufficient to float out the logs and boards awaiting market. The lumber man, therefore, resorted to the expedient of raising the water in the stream by what was called a "pond freshet," which the author has referred to in connection with the movement of petroleum on the Allegheny River. To produce this required the coöperation of all mill owners and lumber men upon the stream. A "main dam" was chosen or erected upon the stream. At a given date, all the sluiceways of the dams above were opened and the water was collected in the main dam and allowed to run over for a time, till the stream below was at the usual depth. In the meantime the logs or rafts were collected or floated into the basins of the main dam. This was a short distance below Titusville. It was so arranged by means of strong uprights called "brackets" or "splashboards," that on a given signal they could be cut loose and the accumulated waters allowed to flow into the narrow stream of the creek. This furnished an average depth of three feet in the shallowest places and had a duration of nearly four hours. It was sufficient, if things went as expected, to float all the lumber to the river. All the arrangements complete, the raftsmen would be ready to cast off the holding ropes, in order, after the first had started. The splashboards were cut away, the water rushing into the narrow channel. There was an anxious wait of a few minutes, which must be carefully timed, so that the first raft did not outrun the flood, get fast aground, and wreck all following craft. The first raft must not leave till the flood wave below the dam had ceased to rise or it would outrun the stream and endanger all that followed. When the stream straightened out in an even flood below the dam the exit might begin. The length of these very few minutes of waiting added to the age of those who had spent many days of twelve working hours preparing for this one striking moment. After the first departure the others followed in order and time as arranged. Oil Creek is not more than sixty yards in width, and it required a great amount of skill and quick decision to manage these unwieldy craft to avoid collision and great loss of property, as well as danger to life. The sound of the rushing waters, bearing upon their surface the many rafts, the flash of the long blades of the sweeps as they were pulled frantically to right or left to make the turns in the creek, the occasional wreck of some unlucky craft demolished in a moment by the battering rams behind, sometimes followed by a jam and the confusion of the whole run, all these were parts of an intense nerve testing experience. It is the most rapid, dangerous run of any

entering the river. The journey to the mouth of the creek being successful, the sections thus floated were fastened together and joined the fleet going to the market towns along the rivers.

The lumber business reached and passed its apex about the year 1830, it is said. "Still every year a number of the old fashioned 'big Allegheny' rafts are seen making their way down the passes of the river," said an author writing in the year 1919. "The presence of the broad bright isle of pine, with its inhabitants ranging from the boy of ten to the veteran of sixty, has become rare in the river towns. There are yet some of the monarch pines in the forests of Pinegrove and President townships (Venango County), with trunks five to six feet in diameter and tops two hundred feet high. To see a dozen of them, their massive boles standing apart and reaching upward like great columns lost in the blue above, forces the feeling that here is one of the first temples. A squared stick of solid pine was recently prepared for the European market from one of the trees in this vicinity; it was forty-two feet long and four feet square throughout its length. It cost a small fortune. The Indians would have made a shrine of that tree, regarding it long in silence, and leaving at its foot some votive offering, perhaps hanging a string of beads upon its branches." Trinkets of various sorts were found sometimes near by, or attached to, these giants of the forest. Members of the race, even at a late date, had similar customs springing out of their feeling of the force back of impressive things.

The author is indebted to A. G. Brehm, editor of the "St. Marys Press," for much interesting information on the subject of the early lumbering industry in Elk County, which was a remarkable forest area. Writing on the subject some years ago, Mr. Brehm said:

"Close your eyes for a moment and picture to yourself the area which now is Elk County! Try to visualize the distance from Benezette to Nansen, from Keystone to North Fork, all one unbroken stretch of grand old forest, trees of pine, hemlock, the hard-woods, trees measuring up to six and seven, or even more, feet across the stump, and high in proportion! Imagine an area of over 315,000 acres of timber that would produce from 20,000 to 100,000 board feet to the acre, and you can then see, in that vision, about 11,500,000,000 feet of lumber. Of course, trying to imagine such an amount of lumber is beyond human power, but it gives an idea of the wealth, in timber, that was available at one time in what is

now known as Elk County. Figured in terms of dollars and cents, this may be a little more clear to the average reader, so multiply the number of thousand feet by the present low price of \$30.00 per thousand, and you will have nearly \$333,000,000 as the result. Of course, lumber, in the early days, did not bring \$30.00 per thousand feet—far from it. At first the best white pine brought only two to four dollars a thousand at Pittsburgh, and at the beginning of the twentieth century good hemlock could be bought for as low as \$6.50, delivered, but as the supply diminished the price increased until today building lumber ranges around the \$50.00 mark.”

We have already related that the cutting of our forests began with the advent of the first settlers, who were forced to clear off the land in order to erect their cabins and to provide space for the raising of the wheat, corn, potatoes and other food that was necessary for feeding of man and beast.

As in the rest of the region, the first industry, next to the grist-mill, was the sawmill, excepting farming. Usually the two mills were combined as one, and run by the same water wheel, but in some cases the sawmill was an individual venture. By 1820 those primitive affairs were located in Spring Run, Toby Run, and in the Mount Morenci district, where James L. Gillis was operating a sawmill, gristmill and carding mill. In the St. Marys-Benzinger district the first sawmill was built nearly twenty-five years later on Elk Creek by the Priests and the site is still called “Priests Mill” by the older settlers.

One of the very last sawmills built along the lines of early mills was that owned and operated by Michael Zwack, just beyond the southern line of St. Marys Borough, on the Kersey Road. This was a water-driven affair, a big wooden overshot wheel supplying the power. The shaft to which this wheel was attached terminated in an eccentric, which operated the single “up and down” saw, as well as pulling forward the simple carriage upon which the log reposed. In the early days a standing joke was that the sawyer could start a log through early in the morning, then work in the fields until noon, reverse the carriage and start the log on another trip against the saw, being quite sure that the second cut for the day would be made by the time he came back home for supper. This, of course, was exaggerated, but the truth is that the sawing was a slow operation by the old method. All the log rolling had to be done by hand, all the

"off-bearing" in the same manner, and working in a sawmill was work of the hardest kind.

Now, in the modern mill, a log is cut into boards or planks in a few moments, and is on its way to either edger, planer, or yard. It is inspiring to visit a modern sawmill and watch the process of manufacture, but it has been said that it is to the old and inefficient mills of the early days that Elk County owes its start in the commercial world and that is largely true with respect to the entire region. Had no progress been made in the process of manufacturing lumber it is safe to say that there would still be much timber standing within the confines of Elk, as well as other counties of the region, but as it is now we have only the second growth and reforestation to look forward to as a source of timber supply in the years to come.

Lumbering on a commercial basis at first meant only the cutting and peeling of the logs, and then bringing them to a waterway to be rafted to some larger center. This was due to the fact that there was not enough capital in the region to finance a manufacturing proposition, on the one side, and—this is probably the stronger reason—there was no way of bringing the manufactured product to market, due to the fact that there were no railroads in this section of the State. The only way out was to float the logs down the streams which, in the Elk County section, meant the Clarion River or the west branch of the Susquehanna River, to some city where the sawmills of the period were located. On the Susquehanna it was principally Williamsport that rafts were headed for, and it has been said that that city owes its present-day affluence to this fact. Lock Haven, too, came into prominence in this respect, but it was to the former place that the bulk of Elk County's timber was taken. On the Allegheny, through the Clarion, Pittsburgh was the main center, but many rafts went as far as New Orleans. John Busch, who lived at St. Marys, made several trips to New Orleans by raft. During the spring of the yellow fever plague in that city, the raft tied up by order of the Federal health authorities, and Mr. Busch took a jaunt up the Missouri as far as Montana, always working on logging jobs along the river, for he was a practical "fast water" man.

"Driving" was still another way of getting logs to the mills and differed from rafting in that the logs, in a drive, were not confined to one mass as in the case of a raft. Driving was always practiced in floating the logs out of the smaller streams to a place where they could be assembled into a raft, which means that they were tied together into one mass, like a "float," to provide for the most efficient

handling. In a drive the logs were rolled into the stream and were left to float down in haphazard manner. It required a crew of men always, and teams often, to keep the logs moving and some would "snag," *i. e.*, they would get caught on some projecting rock or sand bank or other obstruction, and very often this would cause a "jam." Driving could only be carried on during the times of the spring and fall freshets, but later "splash dams" were built to make it possible throughout the summer.

In the recital of the dangers which accompanied driving we can do no better than record an account of a drive which took place in Cameron County and which is such an intimate portrayal of the conditions as they existed then that it might well serve as an example of log driving as a whole. The article is from the pen of James Cassels, a world-wide traveler, who formerly was employed in Cameron County. Mr. Cassels writes as follows:

"During the winter of 1892-93 we had filled the dam two-thirds full of logs, and as soon as the spring freshet came, which they did rather sudden, on account of a heavy rain, we were ordered to sluice the logs. Jack Robertson, a big black, hairy Scot, from Maine, was the boss and knew how to handle logs.

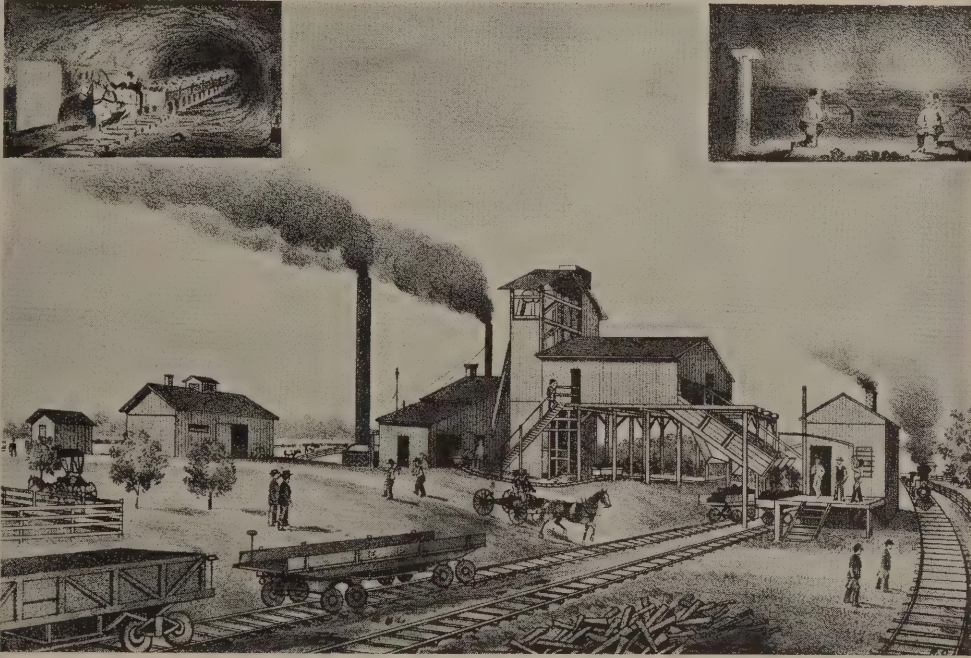
"He gave me charge of the gate and a man to help me. We had practically rebuilt the dam early in the fall, and added about two feet to its height, also built a new gate. After making one run of logs, late in the evening, Jack told the dam crew if it was still raining at midnight, we would have to go down and open the gates, for fear the dam would go out with the flood.

"At midnight the rain was still coming down in torrents, so about a dozen of us, Black Jack in the lead, marched down the mile and a half from the camp to the dam. Well for us we did go, as the water had risen so rapidly it was flowing a foot deep over the top of the dam. Our gangway, or walk, out to the gate was built on top of the cribbing, with the face of the dam-boards about two feet higher. The water as it flowed over the top struck the walk about the center. At first it looked as if we would never reach the gate before the dam would go.

"To navigate the walk, even with our caulked shoes, was impossible, but by scrambling down the embankment below

the dam, wading through pools of water to our necks, we finally scrambled up the cribbage at the gate, and with a half-dozen men on each of the ratchet levers, we soon had the gate high.

"Leaving the two of us to attend the gate in case of accidents the sluicing crew swung down on the booms with pike-pole and peevie. The night was as dark as a black cat,



Coal Mining in Mercer County About 1878

a few flambeaus sputtering from the rain, threw a weird uncanny light on the scene.

"Two White Water men, (so-called for the agility and cool-headed, almost unbelievable feats on floating logs), were stationed one on each side of the gate to keep the logs from jamming in the gate.

"As I stood on the gate platform and watched those two human atoms dance back and forth over those rushing logs, in the very vortex of hell and death, in the dim haze cast by the flambeaus, it made my head swim. Twice the next day we sluiced logs through the gate, but the second time we saw the logs beginning to back up in the stream below, a jam had formed.

"Half a mile below the dam the creek swung to the right and ran against the hillside, almost at a 45 degree angle, unable to cut into the bank on account of a huge strata of rock, the stream swung off at almost right angle to the left.

"What really happened was: At the height of the flood a huge hemlock tree which grew on the bank of the creek, became undermined and fell parallel with, and into the creek and was floated down to the bend. It being too long to make the turn, it was driven with terrific force into the hillside right about the ledge of rock, while the roots were swept across to the opposite bank, completely shutting off the open drive-way.

"As soon as discovered, men and teams were rushed down to open or break the jam. It was quite a chore, but as the gates were shut there was little or no water to bother, but the logs were jammed so tight and fast over and under the tree, it was a good two hours before we got at the culprit. Axes and saws soon converted the tree into logs. To anyone who has never seen a real log jam, the scene was fantastic, logs piled by a seemingly terrific power thirty to forty feet deep, at every conceivable angle, many huge logs with nearly one thousand feet of boards in them standing straight on end, others like mammoth guns, pointed in every direction. All thrown together in an intricate mass, such as a child would make with a bushel of jack straws.

"Being more or less of a greenhorn at log driving, as I had had but a couple of years' previous experience, I had never before seen such a jumble. I was doubtful if all the water I could pour into them could ever straighten out the mess, or even start things moving. When Black Jack yelled at me, 'Let her go Jim,' I put extra efforts into getting those gates up. As soon as the gates were high enough, out of danger of a careening log, I dashed down stream to see the fun, but it was no fun for the boys at the front of the jam. It was not until the water began to take hold, that the key log was discovered away out in the center of the stream.

"The mass groaned and creaked, threatening to let loose with a rush, but the key log held. White water men were dancing here, there, and everywhere over that quivering mass, which reminded me of a field of high strung thoroughbreds, held at the barrier ready to leap to the race. Black Jack,

whose eye was taking in every move, gave a yell, and motioned for everyone to get off the logs.

"Pointing to a rather small log near the center, said: 'That is the *!—!*— that is causing the trouble.' All made a rush, but all were called back but two. One had a double-bitted axe and the other his peevie; not a word was spoken, as those two alert boys, springing lightly from log to log, advanced into the very jaws of death. Logs piled away over their heads; they went where the water boiled, through the lower logs, a perfect caldron, seemingly indifferent to the danger surrounding them, yet they saw and felt every move and quiver of that mass, with every muscle tensed, they made a careful survey of both sides of the jam. The man with the peevie started feeling and prying at the offender, but it still held fast. One could see by their actions they had discovered the key.

"The man with the peevie sprang lightly back, stood poised, while his buddie, first casting his eyes at the towering mass upstream, then at the logs that lay between him and the far shore, deliberately and coolly as if starting to fell a tree, once, twice, he struck and with a snap and a roar the whole mass moved.

"Just for a second it held, but that second was enough, like birds they flitted from one plunging log to another, until each reached the shore, one on either side.

"A detail was sent down stream to keep things clear, while the rest facilitated the moving mass. Fantastic, weird, unbelievable except seen, the grotesque actions of that pile of logs, under the pressure of the dynamic driving force of water.

"The next morning the tragedy happened. Starting from camp before dawn, I can remember the morning was chilly as a heavy frost had taken a grip during the night. As frost slowed up our water supply, we were anxious to get the drive well down to Cameron Pond with high water. Jack sent several details downstream to keep the logs moving, and prevent jams. About a mile below the dam was the pumping station, where the pipe line crossed Hunts Run.

"Just above where the tanks sat there was another bend in the creek, though not as bad as where the jam had occurred. One peculiarity of this place was a huge rock, which had at

some time been undermined and dropped in front; it lay sloping at an angle of about 45 degrees from the bank down into the water. Men clambered over this stone going up and down stream, with their caulked shoes, and thought nothing of it. As this rock had an eddy right above it that had an enticing way of catching stray logs and holding on to them, forming the nucleus of a jam; two men were sent there to keep it clear, Jim Webb, and another, whose name I cannot recall. I had orders to cut loose at 7:00 A. M. sharp, which I did to the minute, with a good head, as the dam was full. Sluicing logs had always a peculiar fascination for me, and I was busily engaged helping to crowd them along the boom, when the sound of a galloping horse, and an excited shout sent me scrambling up on the gatehead. One of our teamsters, riding one of his heavy horses (the harness still on), yelled to me: 'Shut the gate, man drowned.'

"As the dam was not half empty, I knew there was a danger in dropping the gate, lest it would go out with the weight of water, or a log starting on its mad career through the flume, driving into it and smashing it. Hastily securing the brakes I disengaged the hooks from the ratchets, grasped the brake lever, watched for a moment of clear water and let go. The chains rattled, and down plunged the big two ton gate, sliding down its greasy grooves, down with a crash and I felt the whole gateway heave, as the flow of on-rushing water was shut off, but it held. Quinn, the teamster, had dropped off his horse and came over to me. Jim Webb had slipped off the rock at the pump station, right in the head of the splash, being a fine swimmer, with a smile on his face, as he came up, started swimming for shore.

"One of the strange things of log driving is a hemlock log cut and peeled in early summer, piled on skidways and floated the following spring, is dry, light and buoyant, and floats high in the water. If running end on, it gains momentum and is soon running faster than the water that is carrying it. Such a log hit Webb on the temple. He had turned cross stream and encumbered with his wet and heavy clothing, it crushed his head. It did not seem to strike hard, yet he went under, nor was he again seen until the Cameron Pond crew, who had started on the hunt, as soon as notified, found his body in a sitting position among some logs, at the head of

the Cameron Pond, near noon. An autopsy showed no water in his lungs, but the skull crushed at the temple.

"Tragedy cannot long stop the wheels of progress. The drive went on, but we, who were intimately acquainted with Jim, missed his cheery bantering, and oft-times sarcastic jests and fun provoking quibs. This happened many years ago, and many scenes have come to my notice since, battle scenes, where death abounded, but the thoughts of those early days, when danger was as common place as pork and beans, makes a man pause and wonder, wherein lies true heroism. I have seen men win the Congressional Medal, the highest honor a military man can gain, in the U. S. Army, and I have seen just as great deeds in the everyday commonplace of life and the deeds are forgotten, as a nine day wonder.

"We were a rough and ready, uncouth, it may be said, lot of fellows that help strip Nature's covering from Cameron hills, but there was a comraderie among those boys of the axe, saw and peevie, that even philosophers fail to grasp, the thing that makes life worth while, is by doing your level best in the place you happen to be."

The woodsman (he was never called "lumber-jack" in this region) was a character in himself; he was a jolly, happy-go-lucky fellow, fond of practical joking, liked a good song, never ran away from a fight, and could amuse himself in the simplest way, and enjoyed his three meals a day and his bed to the fullest extent. He was loyal to his employer, never demurring at beginning the day at six o'clock in the morning and finishing it twelve hours later, and when the call came he would go to the limit of his endurance in the matter of working hours and the amount of work performed. Some were married, but the majority were single and would "go in," *i. e.*, they would go to camp, for weeks, or months at a time, but when that period was up they would "come out," it meant a holiday, and what a holiday with drinking, celebrating, fighting frequently, and general jollification, until they again "went in."

Dr. W. J. McKnight, writing with reference to the vicinity of Brookville, Jefferson County, in 1840, and what he says would apply to the greater part of western Pennsylvania at that period, referring to "Pine square timber taken out and marketed in Pittsburgh," says: "No other timber was marketable and then only the best part of the pine could be hewed and rafted. Often but one stick could be used

from a tree. In Pittsburgh this timber brought from four to eight cents a foot, running measure."

The square timber business was then THE business. Every lumberman followed it, and every farmer ran one timber raft, at least. The "taking out of square timber" had to be done in the fall, before snow came. The trees were felled, "cut in sticks," "scored in," and hewn smooth and square. Each "lumber tract" had its log cabin and barn. The "sticks" were hauled to the creek on a bobsled in the snow by oxen or horses, and banked until time to "raft in," and get ready for the spring flood. It was the timber trade that made the pioneer prosperous and intelligent.

"The lumberman could contract with the hewers for the cutting, scoring, and hewing of pine timber, complete, ready to be hauled, for from three-quarters to one and a quarter cents per foot. All timber was generally well faced on one side, and was rafted with lash poles of iron-wood or white oak, and securely fastened in position by means of white oak bows and ash pins. Bows and pins were an article of merchandise then. Bows sold at seventy-five cents a hundred and ash pins brought fifty cents a hundred. Oar stems were then made from small sapling dead pines, shaved down. Pine timber or wild lands could then be bought for from one dollar to two dollars per acre."

Hewing, in those days, was practically a science, and some of the hewers became very expert at their trade. A very good example of their work remains in the ceiling and roof structure of the St. Marys Catholic Church, at St. Marys. The ceiling girders are sixty-two feet long, twelve by twelve inches thick, and hewn not only as straight as a string, but also so smooth and free as to give the impression that they were sawed. They are of hemlock, and a fine example of the kind of timber that was available in 1852, the year this church was built.

Shingles, too, were a source of commerce in the early days. The fine white pine trees were ideal for the "shaving" of shingles which, when brought to the Pittsburgh market (most of the shingles were sent to that city), brought a fair price—from two to four dollars a thousand. Shingles in those days were made by hand. A tree was selected, felled, and cut into boles of desired shingle length. It was then split into slabs of half-inch thickness and these were placed into a jack and cut to shape by use of a draw shave.

As an illustration of how many shingles could be cut from a single tree we might give a result obtained by Joseph Cheatle, who at the time was a resident of Benzinger Township. When the St. Marys Catholic Church was being built Mr. Cheatle agreed to furnish the shingles for the roof. The building is sixty-two feet wide and over a hundred feet long, the pitch of the roof being one-third. Mr. Cheatle went to the headwaters of Sawdust Run and selected his tree, and from one tree cut enough shingles to cover the entire roof. At



Main Street, Ridgway

first thought this seems incredible, but when one considers that many of the pine trees measured as much as eight feet in diameter at the stump, and attained a clear height of a hundred to a hundred and twenty feet, Mr. Cheatle's result is not so astounding after all.

Closely allied with the lumbering industry, and standing as one of its chief branches, was the tanning industry, made so because of the fact that until more recent years hemlock bark was the chief source of tannic acid used in the process of tanning. The tanning industry of the region will be treated separately.

Next in importance to tanning as a correlated industry to lumbering was the chemical business. Charcoal, wood alcohol, creosote, acetic acid, and wood tar were the principal products and chemicals

extracted by distillation, the charcoal being the remaining part of the material used, the smoke only being used in the distilling process.

The wood was cut in four-foot lengths and was brought into the yard of the chemical factory to be seasoned. When this was properly done it was placed on small iron cars (in the later days), and taken into the retort, where it was subjected to sufficient heat to cause it to smoulder. The smoke was piped to cooling tanks, then to other retorts, and passed from one process to another until the various chemicals were extracted. About the only operation that was visible in those factories was the making of the acetate of lime. This was the last operation and consisted of pumping the liquid, in which was contained the acetic acid, into an open pan. Here lime was added and the mixture was boiled until dry, the residue being called acetate of lime. During the First World War, when high explosive ingredients were at such a premium, this acetate of lime was taken to another plant and was treated to produce acetone, which was largely used in the manufacture of gun cotton, TNT and other death-dealing agents. Chemical plants in Elk County were located in St. Marys, Hallton, Straight and Nansen and as late as 1928 the volume of business was considerable, the value of the production being \$384,500.

Only the hard woods were used for chemical extraction. Since even the smaller saplings and branches could be used, it has been stated that it was the chemical production that played the greatest havoc with the forests of Elk County, as nothing of tree growth over an inch in thickness was left standing.

Paper making is another industry that helped denude Elk County of its fine forests. The county now has a large paper mill, but it is some years since the source of raw material in the county has been exhausted, practically all the pulp wood now being shipped in. The extent of the paper industry was reflected in a report of 1929, which showed that in that year the value of paper and printing industries combined was \$7,586,100, the second largest of manufactured products in the county. Although in this report printing was included with paper production, it was but a minor portion of the whole.

The paper mill mentioned is located at Johnsonburg, and is now owned by the Castenea Paper Company, who purchased the plant from the New York & Pennsylvania Company. It was built in 1888-89 by the Clarion Pulp & Paper Company, which was incorporated November 26, 1888, by the following: M. M. Armstrong, L. D. Armstrong, W. S. Blakeley, Richard and Robert Wetherill and G. B. Lindsey. Later the company sold out to the New York & Pennsylvania Com-

pany. Since the Castenea firm has taken over the property the mill supplies the paper used by the Curtis Publishing Company, publishers of the "Ladies' Home Journal," "Saturday Evening Post" and "Country Gentleman," and other nationally distributed magazines.

Another subsidiary to the lumbering industry for a time was the building of scow bottoms. These would be used as base for the building of rafts and when the raft would arrive at destination the bottom would be sold to be used as a bottom for coal, ore and sand scows. This, however, was not a very general practice; Bell Brothers, at Bells, Millstone Township, Elk County, operated for a number of years.

For utilizing the waste, *i. e.*, the slabs, in the mills, there were installed mills for making lath, kindling wood, strips for over doors of boxcars when loaded with rough freight, such as cinders, clay products, sand, etc., and in the hard wood mills some of the slab wood was sent to chair and furniture factories to be used in making spindles and other small parts. At one time the manufacture of kindling wood was carried on extensively. Hemlock slabs (the first cuttings of logs to square them) were cut into four feet lengths, and one inch in thickness. These strips were then cut into lengths of two inches, kiln dried, and then tied into bundles of oval shape, about twelve inches long and eight inches at the widest part. These bundles were shipped to the cities, where they brought a fair price. The work of bundling the wood gave work to quite a few young men and women, who made what then was considered fair wages. Factories in Elk County were located at St. Marys, Medix Run, Straight and Portland Mills.

One of the very successful large scale lumber operators of the region was Joseph S. Hyde, of Ridgway, who at his death, it is said, was the wealthiest man in Elk County. He was born in the village of Tamworth, New Hampshire, August 30, 1813, one of a family of nine children. After working in the Maine pine woods he went to Baltimore, and then came to Ridgway in 1837, following "the trail of the lonesome pine," as Mr. Brehm says, for he was lured there by seeing the products of northwestern Pennsylvania's hills while in Baltimore. After a few years spent in this region, he decided to change localities, and in 1840 he went to St. Croix, Wisconsin, but remained only a short time, returning to Ridgway to work in the lumber woods.

Concerning this phase of Mr. Hyde's life, Dr. McKnight writes as follows:

"J. S. Hyde reached Ridgway clothed in overalls, and with all his possessions tied up in a handkerchief. He entered the store of George Dickinson and wanted to buy an axe on credit; on being refused credit he told the store-keeper to keep his axe and go to h—ll, that he would see the day when he could buy the whole store. He was ambitious and an untiring worker. Mr. Hyde had great force and a habit of carrying his hands in front of him with the 'thumbs up,' especially if he was in earnest or excited. Whenever his thumbs were up in the presence of anyone, there was sure to be something happening—an explosion of Christian indignation."

Mr. Hyde's first venture "on his own" was in 1847, when he bought the Gillis & McKinley property, known as the Elk Creek Mill, together with four hundred acres of timber land. This marked the turning point in his business career. He had evidently found his place in the sun. Prior to this his labor had only resulted in a living, but from this time on his untiring energy, close observation, and tenacity of purpose insured success in a large measure.

As rapidly as his capital accumulated, and his credit permitted, he acquired additional timber holdings, built mills, and soon became the largest manufacturer of lumber in the county. He built a beautiful home at Ridgway, the Hyde House, and various other prominent places at Ridgway, and in every way became a citizen beneficent to the county. In the early sixties he built a fine residence on his farm in the Toby Valley, at Hydes, and lived there many years. He died June 30, 1888, survived by four children: Mrs. John G. Hall, Mrs. Esther S. Campbell, Hon. W. H. Hyde, and Mrs. J. K. P. Hall.

The late J. K. P. Hall and Andrew Kaul, too, gained great affluence through ventures in the lumbering business. Mr. Hall was by profession a lawyer, but quite early in his career affiliated himself with Mr. Kaul, a practical lumber man, and the two, together with their associates, later on became very extensive operators. They took off the timber in various sections of Elk and Jefferson counties. The largest of the company's mills was, in later days, located at St. Marys. This mill had a capacity of one hundred fifty thousand feet a day, and it was operated at full capacity for many years; the average annual output for the years of operation was thirty-two million feet. Another mill, and nearly as large, was located at Portland Mills, and mills of less magnitude could be in almost any part of the

regions named. Gradually the partners expanded their holdings and entered the coal mining industry, built the nucleus of the Pittsburgh, Shawmut & Northern Railroad, established factories and thus did probably more than any other two men to promote the industrial welfare of Elk County.

Another extensive lumber operator was H. S. Thayer, of Ridgway. An idea of his activity in this respect may be had from the fact that as late as 1910 he, in company with the Hyde estate, produced between twelve million and fifteen million feet of manufactured lumber annually at the Laurel Run Mill, about two miles west of Ridgway.

It must be remembered that the operations noted herewith were carried on mostly after lumbering had become fully commercialized and that on a broad basis. When the region was young the business was not carried on with such pretensions. We are told that in the days when lumber was being rafted down to Pittsburgh it brought, on an average \$4.00 a thousand board feet. However, the purchase price was not paid in hand—about a quarter was paid in cash, the second quarter was paid in glass and glassware, and the balance in notes maturing any time within the next year. The firm or individual bringing the raft in secured just about enough money to pay off his help; the glass and glassware were sold along the way back, or, if no sale could be made, were traded for pelts, hides, buckwheat flour, or any other article that could be used at home. What was not disposed of when the teams (teams were used to bring the glass back) arrived home was sent to Bushnell Basin, a trading point of the Erie Canal, east of Rochester, and there shipped to New York City and traded for goods. This, of course, was at the very first beginning of lumbering in the region, and as the years rolled by conditions became gradually better, but it was not until the Sunbury & Erie Railroad was built through Elk County that industry really assumed commercial proportions in that section of the region.

In building sawmills in the early days many difficulties had to be overcome; there being no machine shops, only the village blacksmith could help out. Caleb Dill settled at Ridgway in 1828, coming from Columbia County, Pennsylvania, and built a blacksmith shop and dwelling. He was an expert workman in this line and kept the mills running by his skill in making and repairing broken parts. Any part that could not be made or repaired in the shop had to be replaced by a new part, which involved a trip with team, wagon or sleigh to Olean or Cuba, New York, the nearest places where sawmill machinery was

built and repaired, thus incurring much lost time in the mills as well as large expense for the transportation. Later on, of course, machine shops sprang up here and there, and with this acquisition lumbering soon became more remunerative.

The Penn Lumber Company was chartered in March, 1887, with Andrew Kaul, of St. Marys, president; J. K. P. Hall, of Ridgway, secretary and treasurer; Andrew Kaul, J. S. Schultz, W. H. Hyde, John G. Hall and B. Frank Hall, directors. The company was composed of individual owners of lands and mills, banded together for the purpose of manufacturing and selling lumber. The head office was located at St. Marys, and to this office each mill sent regular reports as to stocks, etc., which in turn were forwarded to the branch offices, which were maintained at Pittsburgh and Philadelphia. The branch offices formed the connecting link between the producers and the markets. The products of the mills affiliated with the Penn Lumber Company amounted to eighty million feet annually. Their mills were located in the counties of Elk, Cameron, and Jefferson, twelve in number.

To enumerate the various operators and mills in the region would be too great a task, and it would also become monotonous, but what has been related relative to the industry in the counties which have been mentioned may be applied generally to the entire region, with the counties of Clarion, Clearfield, Elk, Forest, Jefferson, and Warren the most productive.

Nature endowed this region with a wonderful watershed and prolific forest growth, providing the finest kind of lumber; and the region's first commercial industry, because of the density of stand and size of growth, together with the area covered, made it possible to carry on the manufacture of lumber for many years. Had conservation at only a very nominal rate been practiced, today we would have an abundance of timber of marketable size, while lumbering is still carried on within the region to some extent.

It is pointed out by foresters and conservationists that, had only one mature tree been left standing to the acre, the cut-over lands would have become reforested in the years that have passed since lumbering first began in the region. That tree would have thrown off seeds, and a new forest would have developed by natural sequence. But this one tree was not left on the acre; everything went before the woodsman's axe; there was not one thought given to posterity by the greed of saw and bit.

On the other hand, had this one tree been left for reforestation, it would have become necessary for the owners to keep out the fires which for so many years were destructive to our "unseated" lands. Contrary to trying to avoid these disastrous visitations, it was common practice to burn over a "slashing," *i. e.*, the under brush, branches, and other impediments of a lumbering operation. Hunters, fishermen, berry-pickers and others who had occasion to visit the woods were careless in the matter of fire, and the railroads, with their engines emitting live cinders, were responsible for many of these fires which



Fraley Street, Kane

frequently reached large proportions. Some few years ago the Central Pennsylvania Lumber Company, the last of the big operators in Elk County, experienced such a fire and one person and some horses lost their lives thereby. The repeated burning over of certain tracts soon devitalized the ground so that tree vegetation practically ceased.

It was not until the State took the matter in hand that the criminality of permitting forest fires ceased. Once the State began buying land for the establishing of State forests the fire prevention question was at once taken up, and with good results. Fire wardens are now located throughout the region, ready to answer the first alarm that fire has broken out in the woods. These fire wardens are empowered to enlist the service of as many men to help fight the fire as they may

see fit, and their authority extends even to commandeering men and equipment, if necessary to quell the fire fiend. State fire towers are maintained throughout the region for guarding against forest fires. During the spring and fall dry seasons observers are constantly on guard in these towers, armed with strong field glasses and a telephone close at hand. At the first sign of smoke anywhere in the thousands of acres which can be seen from the tower, the observer calls the warden of the district where the fire is located, and within a short time men are on hand to fight the blaze; a very long range of vision is obtained from these fire towers, and the State Forestry Department exercises great care in choosing sites for the towers, placing them at the most advantageous points.

We have seen the devastation brought about by the ruthless lumbering methods as were practiced in former days; we have seen our hills and valleys denuded of the forests, have noted how the resultant recurrences of fires made many sections barren; how soil erosion, because of the removal of the forest growth, has robbed lands devoted to agriculture of the rich top soil; have followed lumbering through the days of \$4.00 a thousand while today its value, especially that of white pine, is nearer \$100 a thousand, and still there is an ever-increasing demand for lumber. The answer to this economic question is reforestation. In one county of the region, which comprises 495,360 acres, it is said that less than a quarter of that land is used for town and farm purposes. A new growth of marketable timber on these idle lands would greatly increase their value in time. Even in natural growth forests, where the fires have been kept out for many years, there is a growth which, in another decade or so will bring big lumber yields. However, in this respect, natural growth is too uncertain, and thus the State encourages reforesting, and this is being done on quite a comprehensive scale by corporations, individuals and municipalities.

Much of the reforestation has been done under contract with the State Forestry Department; by this arrangement the State furnishes the seedling trees, gives expert advice and periodical inspections, and regulates the disposition of the trees, whether for thinning or sale purposes. This arrangement has its good side, though it also has its restrictions, but in all it appears to be practical and that, after all, is what is important in a project so big as that of rehabilitating areas which otherwise can be little else than waste lands.

Reforesting is quite different from what the State itself is doing in the matter of bringing back wealth through the medium of lumber,

for where reforestation is practiced it means that arid land and land practically devoid of plant growth is planted and will eventually form an even growth of timber, while under the State's policy second-growth forests are taken over and given attention. Fires are kept out so far as is possible and everything possible is done to promote tree growth.

In traveling through the region there may be viewed in many places large acreage of lands devoted to reforestation. The city of Franklin has set out approximately one million one hundred thousand State trees. Most of these have been planted on the hill to the west of the city, the same hill from which General William Irvine and Andrew Ellicott, who were sent here in 1795 by the State to lay out the town, looked over the site for the town and planned the streets in harmony with the contour of French Creek and the Allegheny River, upon which two streams the city is located. This is known as Gurney Hill and is being developed into a most attractive recreational center. Other trees were planted on the watersheds of the Franklin City Water Works.

In 1917 the St. Marys Water Company began the reforestation work in Elk County, planting fifty thousand white pine trees, and since that time additional trees have been set out each succeeding year. This company has stated that since the trees have attained a fair growth, the supply of water has increased to a very considerable extent and, during the prolonged drought of 1930 there was not even a danger of water shortage in the territory supplied by this company. The second firm to take up reforestation in Elk County, and which has become the largest planter in the county, is the Castenea Paper Company, operating the large paper mill at Johnsonburg, through whose activities thousands of acres have been reforested.

On the lands of the State at Polk, six miles from Franklin, where is located the Polk State School, to be referred to later, over five hundred thousand trees have been set out and now present a beautiful sight.

The varieties of trees planted throughout the region include the white pine, Norway spruce, Scotch pine, European larch, Japanese red larch, red pine, pitch pine, Japanese larch, black walnut, honey locust and willow cuttings.

What has been related relative to this subject in the two counties mentioned applies to the other parts of the region and it will not be many years more until northwestern Pennsylvania will again have valuable forest land providing great quantities of commercial lumber.

That the woodsman did miss some virgin trees in the region was evidenced in 1940 and, in fact, there are a good number of very beautiful virgin pine trees in Cook Forest, Clarion County, a recreational center which attracts thousands of visitors from distant points each year. After extensive search, R. P. Tonkin, Tyrone lumberman, who sponsored the famed but ill-fated "last raft" of two years previous, contributed the big sticks needed for the restoration of Commander Oliver Hazard Perry's flagship "Niagara," at Erie. He found the big pine trees in Clearfield County, some being cut on the McDevitt tract, at Lumber City; some in Gill Hollow, near Coalport, and some at Frenchville. Ash for the oars was cut near Mahafey. Tools used in cutting the timbers were handed down to Mr. Tonkin from his father and grandfather, who had used them in cutting ship's timber many years ago.

Two trailer trucks, loaded with masts, spars and sweeps hewn from virgin pine and ash trees of Clearfield County, took this material to Erie for this project. The cuttings, assembled at Grampian, were started on the journey to Erie *via* DuBois, Brockway, Ridgway, Johnsonburg, Kane, Ludlow, Sheffield, Warren, Corry, Union City and to destination, the roundabout course mapped out by the State Highway Department because it offered fewer sharp curves to bother the haulers with their one hundred-foot loads. Arrangements were made to stop the caravan en route, where school officials desired to have students view the unusual timbers.

In 1941 a renewal of the once thriving lumber industry upon a more protracted but less profitable scale was foreseen for DuBois in a survey and analysis of timberlands of the tri-county area by Ralph A. Smith, a forest products expert of Tyrone. Mr. Smith estimated that Clearfield, Elk and Jefferson counties have a total of 1,138,000 acres of timberland, with 500,000 acres in Clearfield County, 417,000 acres in Elk County and 221,000 acres in Jefferson County.

That vast acreage is covered with second growth timber, some of which was reforested by nature and some by men, that is estimated by Mr. Smith to amount to one billion five hundred million board feet of saw timber and a greater amount of smaller timber.

A considerable part of the timber acreage is owned by the Commonwealth and Federal Government, neither of which is doing extensive cutting, but he points out that the routine cutting only of the increment, would make possible the development of an industry with a gross income of \$7,000,000 distributed between stumpage, labor and processing costs and transportation. That amount, he points out, is greater than any other industry in the tri-county area.

His findings have started a number of community leaders to consider ways and means of intelligent development that would bring back the industry that provided the original boom to the area and rolled millions of dollars of wealth into the pockets of early settlers half a century or more ago.

A few months after this report was made, a comprehensive program of forest utilization by contracting for lumber from the State-owned forests of Pennsylvania under a selective cutting system, was approved by G. Albert Stewart, Secretary of the Department of Forests and Waters. The action was taken during the conference with the State's twenty-four district foresters and department officials.

The immensity of the Commonwealth's stock of timber was revealed by the secretary when he said that a stock survey completed within the past year showed that there were 2,600,000,000 board feet of timber on 1,654,000 acres of State-owned forest land in Pennsylvania. Of this total, approximately 1,700,000,000 board feet, is of saw-timber size, while smaller trees from eight to twelve inches in diameter, fifty-five inches above the ground, make up the remaining contents of living trees. In addition, there was estimated to be at least 100,000,000 board feet of dead timber, some of which has a possible merchantable value.

The secretary said that the removal of the trees is necessary to obtain a sustained or continuous growth and yield of timber. The inventory, he said, shows that there is an annual growth of one hundred twenty million board feet. If one hundred million board feet were to be cut each year, the growth on younger stands can be expected to increase more rapidly in volume. The big timber, which is adding little or no yearly volume to the increase, is being offered for sale to the highest bidder, according to the secretary's plan.

Certain regulations to guarantee the protection of smaller trees, watersheds, park and recreational areas, wild life and other essentials of sound forest practice are provided for.

The sentiment associated with the early lumbering activities was demonstrated on the occasion of the annual reunion of the northwestern Pennsylvania Raftsmen's Association held at Brenneman's Grove, Clarendon, Forest County, on June 22, 1940.

Despite the heavy rain clouds that hung low throughout the morning and early afternoon, and which at intervals threatened a downpour, which periods, however, arrived and left with but a few drops, nearly three thousand persons were in attendance.

There were river pilots, axe men, log cutters, stump jumpers, corn cob chewers, pine knot eaters, sawmill workers, teamsters and bark peelers from many miles around that noted lumbering and rafting center of a century ago, as well as many persons from nearby counties, and others from distant sections of Pennsylvania and other states.

It was a happy day in the lives of these sturdy men of the lumbering industry along the Clarion River, although many of them tottering with age, their smiles were broad, and every minute of the program appeared to be thoroughly enjoyed. Many were the yarns told by the old pilots that took lumber boats and log rafts down the Clarion River and on to Pittsburgh *via* the Allegheny. Although the list of these great old men of Pennsylvania who had passed on since the previous year numbered about twenty, H. Less Carson, one of the youngest pilots of the group and president of the association, said that in a survey of the crowd he counted nearly forty pilots with whom he was personally acquainted.

While numerous of these men were summoned to the speakers' stand to tell a yarn of their experiences of rafting on the Clarion, some could be conceived as realities, while others were "whoppers," and head man of the show, Carson, smiling, said it would not be any fun if a few of the boys could not tell a "whopper."

A survey of the pilots at the reunion proclaimed Abe R. Clark, ninety-one, of Mars, Butler County, the oldest pilot there. Mr. Clark was born near Helen Furnace in Clarion County on April 29, 1849. He made his first trip down the Clarion for Judge John Brandon, when but sixteen years old.

Ice Trade—Since the time of Nero, when his slaves brought down snow from the mountains with which to cool the emperor's wine, there has been great progress made in refrigeration. And now, with our modern method of making artificial ice and our mechanical refrigeration, it is interesting to note what was a flourishing industry in northwestern Pennsylvania in the early days of the white man's activity in the region.

The type of the winters in this region a century and more ago is revealed in articles found in the "Franklin Intelligencer" of 1835. The very resourcefulness and "onward march of improvements," lauded in the editorial in the January 20, 1835, issue, has practically done away with the "pretty fair business," about which the article tells. That a large percentage of the American homes are now their

own ice factories provides the proof of the statement of this early editor that "a thousand new sources of revenue spring up to supply the place of one that failed."

The editorial:

"It is highly gratifying to witness the onward march of improvements of every kind—the cultivation of the arts and sciences in all their different branches—the development of the mineral resources of the country of which it so much abounds—and above all the opening of new and profitable sources of revenue without the investment of much capital. As generation succeeds generation, so does a thousand new sources of revenue spring up to supply the place of one that failed.

"There are now lying in French Creek at this place, no less than eight flat boats, or arks, owned by Mr. Carlan, of Natchez, and Mr. Bruner, of Vicksburg, Miss., which are being laden with ice, destined for a southern market. Yes, the mere article ice, which we in this frozen region have long looked upon as a nuisance to our streams, has lately become a great article of trade in the more scorching regions of the south. The boats are lined inside with boards and filled in with coal dust between the lining and outside plank in order to keep out the heat. The ice is then cut with whipsaws in pieces of about 22 inches square and carefully stowed in the boat after which it is covered with a thick bed of straw, and thus conveyed thousands of miles from the place where nature formed it, and sold at a profit of more than thrice, compensating the merchant for his trouble and expense.

"It is said that ice, at New Orleans and other southern markets will bring, at the lowest calculation, \$50 per ton cash. Here are eight boats, which will average 70 tons each, which added together at \$50 per ton, would make the round sum of \$35,000. Of this sum not more than one-fourth may be deducted to pay expenses, which will leave a clear gain of \$26,250; and that too, to be made out of frozen water, which if left to melt, would only run there, and scarcely be allowed belly room, let alone bring cash. This is what we would call pretty fair business."

"The Franklin Intelligencer" of March 24, 1835, says:

"Our ice merchants with their boats, or arks, eight in number and heavily laden, pulled off in fine spirits on Thursday morning last. They had a good stage of water to run in and will no doubt reach their destined ports safely. Besides the boats containing the ice, they had lashed to them, two small scows, comfortably roofed and enclosed, containing fire, cooking utensils, provisions, beds, etc., everything in ample order for 'faring sumptuously every day.'"

Our milder winters have, of course, been a contributory factor to the decline of the natural ice business and perhaps they are responsible for the development of machines for home manufacture of ice, "necessity being the mother of invention." Nothing is indispensable in this world of change.

The Tanning Industry—Tanning formed another of the pioneer industries of northwestern Pennsylvania and, as previously stated, the number of tanneries, at one time, was greater than in any other district in the Nation.

It may be interesting to describe the methods used to prepare the skins of animals for the use of mankind, before modern science gave us present-day methods, and before tanning was practiced on a commercial basis in the region. The method used for preparing the skins and hides was substantially as follows: The skin or hide to be tanned was laid flat on the ground, flesh side up, and secured taut by pegs driven through holes allowed at outer edges. When securely fastened the surface would be thoroughly "stoned," meaning that the flesh would all be worked from the skin by means of a flat surfaced sandstone.

When the flesh, or inner side, was thus thoroughly "stoned" the pelt would be turned around, and the same treatment given the other side, until not only all the hair was removed, but likewise the "grain," leaving a smooth, grainless surface.

After the hide had been thoroughly stoned on each side the next step in the process took place, and this consisted of treating the skin to make it pliable and soft. The brain of the animal that had furnished the hide would be placed into a vessel and a little water poured over it. The brain was then broken with a pestle until a milky fluid was obtained. This fluid was then worked into the hide for several hours, the object being to have the pores of the skin absorb as much of the brain-water as possible.

Next the hide would be placed into a smokehouse, where it would be treated to a dense, strong hickory wood smoke for several days. This was the preservative treatment, and it always was given in a thorough manner. After being smoked into leather, for now it really was leather, it would be subjected to a course of beating and rubbing in order to break up any stiffness that might remain after its "tanning" process, and from it would then be made coats, pants, caps, moccasins and many necessities required for the making of which leather was imperative.

Usually the leather was left in its natural color, commonly called "buckskin," but sometimes—especially when used to make shoes, etc., for the women—it was desired to have it colored black, and in such cases it was colored by the following interesting process: Iron scraps, picked up through years, and preserved for this purpose, were placed into a wooden receptacle. Vinegar would be made by breaking up wild fruits—grapes, plums, berries, etc.—and adding water, allowing it to ferment and form acetic acid. This vinegar would then be poured over the iron, and allowed to stand until it became black through its action on the iron. The leather would then be dipped into this fluid, and after having obtained its color, it would be taken out, the free edge washed off, and then dried, ready to be converted into whatever it was needed for.

In cases where it was desired to save the fur the tanning process described would be used with the exception that the hair side would not be "stoned." Otherwise the process was the same, for it must be remembered that it was the only process then known to the people who called the wilderness their home.

We have already made mention of the tanneries located in Erie in the first years of the nineteenth century, one of which was in operation until 1852.

So far as can be ascertained the first tannery in Elk County was built about 1830 at Ridgway by Enos Gillis, with James Gallagher as tanner. However, few data relative to this are available; the tannery operated for many years. Then, in 1850, a similar enterprise was started at Kersey by a man named Connely. It stood east of where the Catholic Church stands, and was a very small affair, but operated for about twenty years.

In 1855 Judge Schultz began work on building a tannery at St. Marys on South St. Marys Street. This tannery was quite a pretentious affair for those days in that it had real steam driven machinery. The boiler for this plant was brought there from Buffalo, when it

had done duty on one of the lake boats. It had only three flues, each about a foot in diameter. This boiler furnished the steam to operate a small engine which, in turn, operated the mill for grinding the bark, and it is said that the noise made by this bark mill when in operation could be heard fully a mile away.

The plant had sixteen vats for containing the hides in the process of tanning, each four by six feet in area, and five feet deep. These vats had to be pumped by hand when it was necessary to change the "liquor," the pumping being done by one of those square hand pumps



Post Office, Ridgway

which were never too swift nor sure in their operation. Only five men were employed in the tannery while Schultz operated it.

Judge Schultz went bankrupt after a time and the property was acquired by Joseph Wilhelm, who operated it until he, too, fell into bankruptcy, when it lay idle for several years. In 1885 the plant became the property of Hall & Kaul, who placed Joseph J. Mayer in charge, and the manufacture of sale leather was carried on for several years. It has since been razed, and the ground has been laid off into town lots, and is now occupied by dwelling houses.

In 1865-66 the first Wilcox tannery was built by Mr. Ernhout, followed three years later by the Schultz tannery at the same place.

The latter became one of the numerous plants of the Elk Tanning Company.

Grant & Horton built the Ridgway tannery, located just west of the Ridgway borough line, at the foot of Arnold's Hill, in 1867, and it was dismantled in 1925.

The Eagle Valley Tannery, also located at Ridgway, dates from 1870, when W. H. Osterhout purchased 135 acres of land in Eagle Valley for the site, and nearly nine thousand acres of hemlock bark-land. This was later increased to twenty-six thousand acres. The company was incorporated in 1888 by W. H. Osterhout, C. D. Osterhout, Jackson Schultz, Louis H. Schultz, and W. B. Benson directors, and G. W. Childs treasurer. Many additions have been made until this is one of the largest tanneries in the country. In 1893 this tannery became a part of the Elk Tanning Company.

The tanneries which have been mentioned were among the pioneer plants established for the manufacture of leather, but later on others were built, for with the immense supply of bark to be had it was natural that such industries should thrive.

Sheffield, in Warren County, at one time had three tanneries active, one of which, known as the Instanter plant, was very large, covering hundreds of square feet of ground. New methods of making leather resulted in all of these plants being abandoned. The Instanter plant was closed many years ago, and in an effort to retain industry in the town a company was formed to make furniture. This failed and the buildings in the heart of the town were sold, as well as the lumber and junked machinery.

However, the old time industry is still represented in the region with plants at Mt. Jewett and Ludlow in McKean County; at Hickory, in Forest County; at Wilcox and Ridgway, in Elk County, and at Clearfield and Curwensville, in Clearfield County.

The pioneer tannery on a larger commercial basis was in its time the largest tannery in the United States. A description, taken from Beers' "History," is given herewith to give an idea of its proportions:

"The tannery at Wilcox was built in 1870 and enlarged in 1885. It employs 250 men inside and 50 outside. In the summer employment is given to 400 bark peelers. It has 723 lay-away vats, and 6,000,000 pounds of leather are tanned yearly, which represents 333,000 sides, over 1,000 sides of leather every working day of the year. The tannery consumes from 24,000 to 25,000 cords of bark yearly, which is

peeled on the company's own lands. A well equipped broad gauge railroad, with cars, engines, and sidetracks, is among the judicious accoutrements that enable the firm to transport bark and material from the forests to and around the complicated sidings that gridiron the property for six miles. As the supply of bark is one of the most urgent necessities of a tannery, the elder Schultz made liberal provision, to which the sons have made some very handsome additions, by way of increased acreage. They now own in fee and control the bark and lumber on 40,000 acres of land in the counties of Elk and McKean. It is lighted by both electricity and gas, and so also is the town. Gas is used in the furnaces in connection with tan-bark for making steam. There are thirteen boilers, representing about 700 horsepower, which furnish steam for nine engines, eight large steam pumbers, and five power pumbers. There are ten rolling machines, which are kept running night and day. Some very large buildings, constructed entirely of lumber, occupy the major portion of the land used exclusively for the tannery, chief of which might be mentioned three drying, washing, engine, polishing, and vat-houses. Seven hundred and twenty-three vats, seven feet wide by nine feet long, and five and one-half feet deep, the actual capacity of the firm, make it preëminently the largest tannery in the world. This great industry was established by Maurice M. Schultz, who came into the wilderness about twenty-three years ago (about 1867). Over \$1,000,000 capital are invested in the tannery, in the town of Wilcox, in the railroad tracks and sidings and general paraphernalia, indispensable to the successful conduct of such a mammoth establishment. Employer and employees work in perfect harmony at Wilcox, a hamlet having a population of 1,200 people, who subsist, directly or indirectly, upon the prolific income of the business. Cozy two-story houses are provided for most of the tenants. A handsome residence is furnished the superintendent, A. A. Clearwater, who lives on elevated ground overlooking a hundred or more acres occupied by the town and tannery. The present owners (1890) are Norman and Irving Schultz. The former attends to the buying of hides and the selling of leather in New York, while Irving resides at Wilcox, and looks after the management of the tannery and the extensive gas and oil interests of the company."

Figures for 1928, supplied by the Department of Internal Affairs, Bureau of Statistics, Commonwealth of Pennsylvania, give an idea of the importance of the tanning industry to Elk County, and show that under modern manufacturing methods the industry has been able to survive the passing of lumbering operations and its inherent supply of tan bark. Quoted from this report are the following figures: Number of establishments, ten; four owned by corporations and six by individuals. Average number of wage earners, 727; American, 624; foreigners, 103; one female being employed. Wages paid males, \$911,000; females, \$600. Twenty-six office employees and salaried persons were paid \$50,800, making a total of \$962,400 paid. Capital invested, \$2,325,900, and the value of production was \$12,422,500.

The Early Iron Industry—Iron making flourished in Pennsylvania during the eighteenth century and played an important part in laying the foundation of the Commonwealth, and in this industry northwestern Pennsylvania had a prominent part. Clarion, Venango and Mercer counties contributed largely to this early industry.

From an article on "The Iron Industry in Clarion County," by Judge Theophilus L. Wilson, we quote the following:

"Iron, while being the most useful of all the metals for the various arts, is also one of the most generally diffused of the products of nature. In one form or another it is almost universally present throughout the organic and inorganic world. The history of its use is lost in the remoteness of antiquity, since from its affinity for oxygen and its consequent tendency to rust and thus lose its form, it can hardly be expected that any tangible evidence of its use in ancient times should have been preserved to our day. Modern archæology, however, divides the periods in the early history of the human race into the stone, the bronze, and the iron eras, thus indicating the gradual advance of mankind toward a methodic knowledge of the natural products of the earth and mastery of them for human purposes. From the very beginning of historic times, therefore, iron has been a precious metal, indeed, to man.

"In the early ages man soon found that wooden, bone, stone, and clay weapons or implements did not give him adequate protection against the wild life of that period or against other tribes, nor did they make for successful hunting, nor did they provide him with proper cooking utensils and were not of

lasting enough quality for buildings or, in a later period, for adequate transportation. In his search for a better material to answer his many needs, he therefore finally discovered that iron would provide him with all the necessities of life, except food, and would greatly aid him in keeping up his food supplies, both in the hunt and the tilling of the soil.

"There is but little record of ironmaking in Europe during the first seven centuries of the Christian era, yet in the sixteenth century the discovery in Sweden and Norway, in France and Silesia, and elsewhere, of slag heaps overgrown with trees, which on examination frequently proved to be six centuries old, showed that the mining and working of iron must have been extensively practiced at an early age."

The manufacture of iron in the United States dates from a period very soon after the settlement of the country. From a tract, entitled "A True Declaration of Virginia," published in 1610, only three years after the successful settlement of a colony at Jamestown by the London Company, we find that in this year Sir Thomas Gates testified before the Council in London that in the country there were diverse minerals, especially "iron oare," some of which having been sent home, had been found to yield as good iron as any in the world. From "A Declaration of the State of Virginia," published in 1620, we find that among those recently sent out to the colony, there were "out of Sussex about forty, all farmed to iron workes."

The first iron works in what is now the United States of America were erected at Falling Creek, Virginia, near Richmond, in 1619, by the Virginia Company, but the Indian troubles and the revocation of the charter of the company in 1624 caused the foundry to be closed. The first successful iron works were located on the Saugus River, near Lynn, Massachusetts. These works were built in 1643 by John Winthrop, Jr., and ten other Englishmen, who formed the "Company of Undertakers for the Iron Works."

It is not known to this author when the manufacture of iron first started in the Commonwealth of Pennsylvania, but there are records at Harrisburg giving the names of the forges and the amount of iron made in Pennsylvania from the year 1749 to the year 1756, all based on returns made to the Hon. William Denny, Lieutenant Governor of the Commonwealth, by the respective owners of the forges; and the amount of iron manufactured by the different forges during the time above specified amounted to a total of only 3,378 tons.



Aerial View of Erie

According to a table of furnaces in Clarion County, in Israel D. Rupp's "Early History of Western Pennsylvania" (1846), the annual production of the iron furnaces in the county at that time amounted to sixty thousand five hundred tons, and the statement is made that the amount of iron annually produced there equalled "all the iron manufactured in the different forges in Pennsylvania, ninety-five years ago," or between the years 1749 and 1756. "A Gazetteer of the State of Pennsylvania," by Thomas F. Gordon, published in 1833, states that the committee on the manufacture of iron, appointed by the tariff convention held in New York in October, 1831, returned for Pennsylvania in that year forty-six furnaces making 32,156 tons of pig iron. Gordon, however, disputes these figures and states that this number of furnaces is too low and that the actual number was, perhaps, not short of sixty, and the quantity of iron produced fully fifty thousand tons. Whichever figures are correct, it is apparent that by 1846 Clarion County alone produced more pig iron than was produced in the whole Commonwealth of Pennsylvania as late as the year 1831.

The "Gazetteer" further states that of the fifty thousand tons of iron manufactured in Pennsylvania, a large proportion descended the Ohio River, that the fifty thousand tons had an average value of \$70 per ton, bringing a total income of \$3,500,000.

Christian Myers, a resident of Lancaster, Pennsylvania, in the year 1826 purchased a half interest in a large tract of land in western Pennsylvania and, in that same year, desiring to go over these properties, he arranged to make the journey to the western wilderness, which was later to become Clarion County. In some manner Myers had heard that there were indications of large beds of iron ore underlying the land in the new country in which his property was located. He, therefore, had his agent, Henry Bear, an expert iron-master, accompany him on the trip, and they made the trip from Lancaster to Venango County on horseback. After their arrival in that part of Venango County which later became a part of Clarion County, the two settled near the junction of Little Toby Creek and the Clarion River. The two pioneers built a log shack and, in 1828, having found iron ore, timber, limestone and water power in abundance, they erected the first iron furnace in the county. It was known as "Clarion Furnace," named after the Clarion River. The furnace stood on the bank of the river, just west of the mouth of Little Toby Creek. The "stack," as these early furnaces were called, was thirty feet high by eight feet at the "bosh" or widest part of its interior. It was the pioneer stack in the county.

Christian Myers and Henry Bear were so successful that their venture was quickly followed by others. Shippenville and Lucinda furnaces were built in 1832 and 1833, respectively, and these were followed by the construction of many others as the industry grew rapidly. Every year saw the erection of new stacks, and the climax was reached in 1845, when eight new furnaces were built. A few were added after 1845, but the industry had then begun to decline. There were, however, a total of thirty-one stacks or furnaces built and in operation in the county by 1860.

Henry Bear, Christian Myers' partner, was the designer and builder of the first furnace in Clarion County and all the furnaces that followed his were accurate copies of the original Clarion Furnace. Bear's furnace, which never was improved upon in all the years of the county's iron era, was built of rough stone. The great blocks were dressed at the edges and keyed with wooden crossbeams. The furnace was thirty feet high. Its sidewalls were thick and strong; for, although its barrel-shaped interior was but eight feet in diameter at its widest part, the stack was twenty-four feet square at the base outside. The inside of the stack was lined with fire brick, which had to be renewed every few years, and for that purpose an entrance was left in the front of the furnace. This opening, however, was kept walled up while the furnace was in blast.

Charcoal was the fuel used in early iron manufacture, but in the latter years of the industry it was supplanted by coke in many of the stacks. For the manufacture of charcoal almost every wood in the county could be used, except hemlock, and of these woods chestnut produced the most charcoal for the quantity of wood employed and birch the least. The wood was burnt in small clearings called "coalings" or "hearths," and in the woods surrounding Clarion for a great many years after they were abandoned these coalings or hearths were easily found, as no trees or underbrush would grow on them, and they were favorite playgrounds for the children and young people when visiting the woods.

In Clarion County the ore was mined from drifts or banks, and sometimes when the bed lay near a level surface, open excavations were made, which were called "strippings." The ore was hauled to an open space called the "furnace yard," which lay on a level with the top of the stack, and the furnaces were always built at the base of a little bluff or against an abrupt hillside in order to facilitate the conveyance of the ore to the mouth of the furnace or "tunnel head." After a preliminary burning to free it from dross and dirt, the ore

was wheeled on a bridge to the tunnel head and dumped in. The process of charging the stack was as follows: A thick bed of charcoal was laid in the bottom of the shaft; upon this was placed a layer of ore, which was followed by a layer of limestone, and upon the limestone rested another layer of charcoal; then layers of ore, limestone, and charcoal were placed in rotation until the stack was charged for its full height. All items of the charge were in lumps so that the general charge would be kept open for the passage of gases; finer material would have prevented this necessary exit of the gases. The iron in the lowest zone was reduced by the terrific heat from the underlying charcoal and trickled to the base of the mass. Impurities, chiefly silicon dioxide, were fluxed with the limestone to form a glassy slag, which also trickled down and covered the molten iron, and at intervals of about six hours (four times a day usually), the iron was drawn off through openings in the sides of the stack at its base. These openings were called "notches" and were kept solidly closed with clay, and when the iron was to be drawn off, the clay was broken in with a bar, and at the end of the run the notch was reluted, as it was called, with clay. The liquid iron spurted out through the opening made by the bar and ran into a bed of wet sand, where it filled the familiar molds known as "sows" and "pigs." The term "pig iron," of course, arises from the plan upon which these molds were laid out. Before the iron could be drawn off, the slag had to be taken out, and this was done through a notch or opening at a slightly higher level than the one intended for the iron and on another side of the stack. The air blast entered the furnace from still another side. The bellows used to supply the air blast were commonly of two patterns. First, and somewhat rare, was the conventional blacksmith's bellows, which was heavily weighted with boulders for the compression and was lifted by a water wheel. The second type, more generally used, was the double or continuous bellows, which consisted of two large, box-shaped pits solidly lined with wood, into which two box-shaped wooden plungers fitted snugly, and these plungers were suspended from either end of a walking beam which was operated by water power. The air blast entered the stack through an underground passage called the tuyere. In furnaces known as "cold-blast," the air current was driven directly from the bellows to the interior of the furnace, and in "hot-blast" stacks the air passed through a heated coil of pipe before entering the shaft.

The upper masses of the charge in the stack were always comparatively cool and became progressively hotter as they slowly

descended, until they came to the intensely hot bottom zones of reduction and fusion. The process was continuous as the construction of the shaft below the bosh helped to support the cooler charge above and to prevent it from crushing down into the reduced metal. The top of the furnace was closed by an inverted, bell-shaped cap, which was suspended inside the shaft, and this cap could be lowered to receive the ore from the dump.

The furnaces at first produced from fifteen to twenty-five tons of pig iron per week, according to their capacity, but in later years, by improved processes and larger and stronger blasts, the weekly output often reached fifty tons. The pig iron was sent down the river to Pittsburgh in flat-bottomed boats, which were sided to increase their carrying capacity. The usual boats for hauling lumber and other products of that day were twenty-six feet wide and 170 feet long, but the boats used for the transportation of the pig iron were somewhat smaller. Some of these boats were constructed by the owners of furnaces, while some owners purchased their boats from the lumbermen along the Clarion River. The usual maximum boat-load of pig iron was one hundred tons, but the average was less than that, and it is estimated that the river trade in iron in Clarion County required more than four thousand boats. Clarion River shipments of pig iron were carried on for more than a quarter of a century after the year 1845, and the yearly average shipments were about the same as those of 1845, which were estimated to have been about twenty-one thousand tons from the furnaces using only the Clarion River for transportation.

In the year 1856 about five thousand tons of iron were shipped, and in 1871 Sligo and Madison furnaces, together, shipped about five thousand tons, of which Madison shipped more than three thousand. The river shipments ceased for Sligo in 1872 and for Madison in 1873. The following furnaces located in Clarion County did not load on the Clarion River, but loaded on the Allegheny: Clinton, Hemlock, Black Fox, Catfish, Sarah, and Redbank. While Redbank Furnace made iron up to the nineties, river shipments were discontinued and rail shipment substituted, because of the completion of the Allegheny Valley Railroad to Oil City in the year 1866.

The chief loading points in the region were at Clarion, just where the State Highway Bridge now spans the river; at Hahn's Ferry, which was at the mouth of Piney Creek; at Callensburg; and at Redbank. These places were the scenes of much active life and bus-

tle; it frequently happened that several hundred men would be found there at one time, loading barges for the various iron companies.

There was no certainty as to when the rivers would rise sufficiently to make boat transportation safe, but rivermen could at least always count on an early spring rise. Sometimes there was a second rise in June, and there was, of course, always a fall rise. As the fall rise was sometimes late, however, and there was danger of the river at Pittsburgh freezing over before they could dispose of their boat bottoms, the owners very naturally preferred to take advantage of the certain spring rise and the somewhat uncertain June rise. As there were no means of bringing the barges back upstream, they were sold in Pittsburgh, where there was a ready market for them, and they were used for coal barges and other transportation purposes on the Allegheny and Ohio rivers. One of their principal uses was for the transportation of coal to southern points. The men who operated these boats to the Pittsburgh market had very poor means of transportation back; a few would travel by stagecoach, but the majority would make the trip on foot.

The larger furnaces, such as Lucinda, Madison, and Shippenville, employed from seventy-five to one hundred hands, and the smaller ones, such as Washington, Wildcat, and Mary Ann, from twenty-five to fifty. The men were in a sense Jacks-of-all-trades—miners, teamsters, woodchoppers, charcoal burners and furnace men, and their wages ranged from twenty to twenty-six dollars per month, which was considered good compensation for those days. About one-fourth of a man's wages was usually paid to him in cash and the balance in orders on the company's store.

Between 1845 and 1854 more than half of all the iron made in northwestern Pennsylvania was manufactured in Clarion County, and in other sections of the State it was referred to as the "Iron County." In the year 1842 a newspaper was started in Clarion called "The Iron County Democrat," which was owned and edited by B. J. Reid and Samuel Duff. The county's iron export in those years realized an aggregate annual income of about seven hundred thousand dollars, and of this amount about one hundred thousand dollars went to non-resident operators or owners, while the remaining six hundred thousand dollars remained with the resident owners. While it is true that this figure was an exceedingly large one for that early period, and while it is also true that the thriving industry brought with it an era of booming prosperity, yet the gloomy fact remains that a majority of the individual iron operators, themselves,

failed. The profits realized in prosperous times were not sufficient to tide them over the non-prosperous periods in the trade, and, in addition, although they themselves were forced to support heavy payrolls, they often were obliged to accept promissory paper in return for their finished product.

During its most profitable days the iron industry of Clarion County had the benefit of a high protective tariff. The repeal of the protective tariff by Congress in 1846, however, was the death blow to the industry in the county. One of the Clarion newspapers, in printing the announcement of the catastrophe, framed its columns in mourning. Prices of iron dropped from twenty-eight to twenty dollars per ton, which hardly covered the cost of production. Nevertheless, enterprises in which so much money had been invested could not lightly be abandoned, and the industry struggled on for several years longer. The acute effects of the repeal were not fully felt until 1850, when a number of the local iron companies were forced out of business. In the years immediately succeeding, there were a few passing revivals of the trade, but the period of depression following the Civil War brought with it the final decay of the furnaces in the county.

From 1852 to 1854, in consequence of the great interest in railroad construction and the enormous demand for iron, there was a general revival, and in March of 1854 iron brought the extraordinary price of forty-two dollars per ton. The panic of 1857 again prostrated the business and many stacks were abandoned, only those having the firmest financial basis withstanding the ordeal. A second but transitory revival was created by the war, and from 1862 to 1865 iron commanded booming prices. In 1866 and 1867, however, the reaction came. Madison Furnace survived until 1873; Monroe Furnace continued making a little iron at intervals until 1882; and Redbank went out of blast temporarily in January, 1883. There were other contributing causes to the decline of the iron industry, but the primary causes of the decline in Clarion County were: first, the ill effects of the repeal of the tariff of 1842; second, the decline in the price of iron because of the competition of large coke and anthracite stacks; third, the depletion of timber; fourth, the increased cost of ore from long drifts and hauls; and, fifth, competition with the Lake ores.

Of the many furnaces once flourishing in Clarion and maintaining an industry that immensely increased the population, prosperity, and wealth of the county, all are now unused and in ruins. Washington

Furnace, which stands in the southwestern corner of Clarion Township on the road leading from Mechanicsville to Reidsburg, is probably in the best state of preservation. Some years ago some person interested in the old furnaces in the county had the Helen Furnace, which is just a short distance from the highway leading from Clarion to Cooksburg, cleaned out and restored to an extent that enables one to get a fairly good idea of the interior construction of the old stacks. The lower part of the historic Martha Furnace, located a short distance south of Reidsburg, is still intact and is used as a springhouse.

The iron furnaces were usually named for the locality wherein they stood, for the wives of their owners, or in honor of various presidents of the United States. These crude but historically important furnaces were troublesome to handle and their product difficult to standardize. A person interested in their history once asked a descendant of a former prominent line of foundry men why it was that the old-time ironmasters usually gave their furnaces a feminine name or named them after one of the Presidents of the country, and with a sly wink the old gentleman answered: "I think it was because they never could tell exactly how their furnaces were going to act."

Shippenville Furnace, erected in 1832 at the junction of Deer and Paint creeks, one mile southeast of Shippenville, a hot-blast furnace, nine feet across the bosh by thirty-two feet high, and abandoned in 1859, had in connection with it a forge, the only one in the county. It stood a mile farther down Deer Creek, and made altogether fifty tons of bar iron.

Lucinda Furnace, built in 1833 on Paint Creek in Knox Township, a hot-blast furnace, eight feet bosh by thirty feet high, was lost by its original owners and, in 1843, was purchased from the assignee of the former owner by James Buchanan, afterwards President of the United States, and John Reynolds, of Cornwall, Lebanon County. At the same time they purchased 4,351 acres in Knox Township for \$20,500. Buchanan visited the furnace in June, 1843. The iron made at this furnace had a high reputation with mill and foundrymen. In 1845 it produced one thousand two hundred tons per year; in 1856, about one thousand five hundred. It was abandoned in 1858 on account of low prices and scarcity of timber.

Madison Furnace, built in 1836 on Piney Creek, two miles from the Clarion River, steam cold-blast, nine feet across the bosh by thirty-two feet high, produced one thousand tons in 1845; two thousand five hundred tons, in 1856, of mill metal out of argillaceous

carbonate ores of the coal measures close by and, in 1872, made 3,048 tons. It was abandoned in 1873 in consequence of the panic of that year.

Jefferson Furnace, built in 1838 on Beaver Creek, at Jefferson Station, eight feet bosh by thirty feet high, produced eight hundred tons in 1845; in 1856 about eight hundred tons of forge metal out of limestone and bog ores. It was abandoned in 1858, chiefly on account of lack of timber.

Clinton Furnace, built in 1841 on Hemlock Creek, in the extreme northwest corner of Washington Township, nine and one-half feet across the bosh and thirty-three feet high, produced one thousand tons in 1845 and in 1856 two thousand tons of forge metal out of fossil buhrstone and fossil limestone, lower coal measure ore, mined two miles south of the furnace.

St. Charles Furnace, originally Coheco, built in 1844 on Leatherwood Creek, about three miles from the Low Grade Railroad, ten feet across the bosh by thirty-three feet high, hot-blast introduced in 1857, was built by John and Samuel Wilson, of Strattonville, Pennsylvania; purchased in the spring of 1846 by J. and P. Kerr. of Clarion; leased in 1861 to Michael McCue, who operated it till 1865, when it was dismantled. Its production in 1845 was one thousand tons; in 1850, two thousand tons. This is the only furnace that employed raw coal. The report of the second Geological Survey of Pennsylvania on "The Geology of Clarion County" (1880), says:

"Though essentially a charcoal stack, this furnace was run for one year on coke made from the Freeport Lower coal, and for nearly a year on raw coal from the Freeport Upper bed, which, in this vicinity, is of a 'block' character. Unnumberable thin layers of mineral charcoal disseminated through the bed, divide the bituminous portion into such thin laminæ that any appreciable swelling or melting of the mass is rendered impossible, and each lump preserves its shape until entirely consumed."

Pike Furnace, built in 1845 near Wildcat Run, three-fourths of a mile north of Lawsonham, steam hot-blast, eight feet bosh by thirty feet high, was originally built as a cold-blast stack. Its production in the 1845 period was one thousand seven hundred tons; in 1856 about one thousand five hundred tons. Iron was made from limestone ore, soft brown and hard blue, in beds that crop out horizontally among the coal measures around the furnace.

Prospect Furnace, built in 1845 on Cherry Run, one mile south of Callensburg, steam cold-blast, eight feet bosh by thirty feet high, manufactured in thirty-nine and a quarter weeks, in 1856, 1,450 tons of mill iron out of blue coal measure limestone ore from many banks within three and one-half miles around.

Sligo Furnace, built in 1845 on Licking Creek near Sligo, in Piney Township, steam cold- and hot-blast, changed to hot-blast in 1857, produced in 1845 one thousand five hundred tons; in 1856 two thousand four hundred tons of rolling-mill iron. The furnace received its name from Sligo, near Pittsburgh, where the company's iron works were situated.

Martha (Polk) Furnace, built in 1845 near Reidsburg, Monroe Township, steam cold-blast, built by Christian Myers, was owned and managed by Nelson Hetherington most of the time. It was erected as a successor to Clarion Furnace, where ore and timber were growing scarce. Martha Furnace was purchased by Lyon, Shorb & Company, but was never put in blast by them; timber in its vicinity grew scarce, and the stack was dismantled in 1856. Its approximate production at first was 1,000 tons; in 1854 it made 1,260 tons. Judge Myers, the first proprietor, was an ardent supporter of Polk, and called the furnace after him. When the tariff of 1842 was repealed, and the change was sanctioned by President Polk, Myers became disgusted and would not suffer the furnace to bear the name any longer. He, therefore, rechristened it after his wife, Martha.

Helen Furnace, built in 1845 about eight miles from Clarion on the Scotch Hill Road, cold-blast, eight feet bosh by thirty-two feet high, made in twenty-six weeks of 1856, 756 tons of iron from ore mined back of tunnel head. It stopped manufacture in 1856 or 1857. This furnace is locally called "Heelen," for the following reason: It was erected on the old McNaughton farm, and the builders named it "Highland" Furnace in honor of Alexander McNaughton, who prided himself on being a Highlander. But, as the word was pronounced, according to the north-Scottish dialect, "Heeland," the name was soon corrupted to "Heelen" Furnace, and this fact led to the erroneous supposition that it was christened with a feminine name (Helen). The name of the township has the same origin and is commonly, but incorrectly, pronounced "Heelen" Township.

Redbank Furnace was built in 1859 at the mouth of Redbank by Thomas McCullough, formerly of Lyon, Shorb & Company. Alexander Reynolds shortly became a partner; McCullough was replaced by Moorhead, and the firm became Reynolds & Moorhead. This

stack was a successor to the old Redbank Furnace across the creek in Armstrong County. The first stack on the present site of Redbank Furnace was thirty-nine feet high and eleven feet across the bosh; it has since been raised to a height of sixty-four feet, and its equipment much improved and modernized. The old furnace used coke made in pits and produced an average of ninety-five tons a week; in 1887 there were forty coke ovens in connection with the plant, and the capacity was 150 tons of metal per week. The ore, coal, and limestone are all found together on the river hillside above the furnace and are carried down an inclined plane tramway to the terrace or yard. The coal is prepared for coking by a machine capable of crushing and washing eighty tons per day. The hearth is of flagstone, and the tunnel mouth has a "bell and hopper" cover; the gases are conducted down a pipe called the "down-comer," and distributed between the boiler and hot-blast. An upright engine, 225 horsepower, sixty feet pressure, and five feet stroke, forces the air into the hot-blast and fan, and thence to the furnace; there are six boilers in a "double-decked battery," three feet wide, and thirty and forty-four feet in length. From the hands of Reynolds & Moorhead the furnace passed into those of Alexander Reynolds, and finally to Alexander Reynolds' sons, the present proprietors. It suspended operation in January, 1883, but resumed and continued operations until the early nineties.

Of the numerous furnaces in Clarion County, we have referred individually to only those with which there has been associated some feature that might be of unusual interest. The others all contributed to this important early industry of the region.

Residents of the county are now hoping that the once flourishing iron industry will be revived. A search for high iron content ores has brought to the attention of the Clarion County Chamber of Commerce specimens from seven different locations that test from 39.03 per cent to 58.1 per cent. metallic iron. This compares favorably with other high grade iron ores. The fossiliferous limestone ores tested showed from 31.5 per cent. to 38.75 per cent. of metallic iron.

Interest in the county's ore deposits was revived by the announcement that the United States Bureau of Mines is considering erecting test plants for the production of sponge iron as a substitute for scrap.

Ore beds in Clarion County are from ten inches to four feet thick, and lie in close juxtaposition to limestone beds. This ore makes excellent iron for all ordinary purposes, and some of the higher grades are well adapted for Bessemer steel.

The iron industry had its beginning in Venango County with the erection of a furnace at the mouth of Oil Creek in 1824, and the Anderson Furnace in 1825 in Scrubgrass Township.

The following quotation from "The Franklin Intelligencer" of Franklin, April 7, 1835, is of particular interest at this point, both because of its content and its author:

"FOR THE INTELLIGENCER

" 'A CARD'

"To the Proprietors of 'Oil Creek Furnace'

"The undersigned, 'Chief of the Seneca Nation,' asks information from the proprietors of that establishment, (if answer would not be incompatible with the interests of the company), why all the paper that is afloat bearing their signatures, is dated 'Oil Creek,' etc? The most uninformed white people know, as well as my red brethren, that that tract whereon 'Oil Creek Furnace' is built has been known to bear *my name* for years, before you, Mr. Iron masters were born; it was a *gift* to me from the Commonwealth, for the services of my nation (under my command) rendered to Pennsylvania, in the American Revolution; and which name, the high authority of the white people's laws has recognized.

"How strange it is, that those who say that education is knowledge, should, when writing, on the land in a house, forget that fact and deceive people by dating the writing on a Creek of Water. What would a white man say to one of my Indians, if asked where he lived, and the Indian should reply, 'Allegheny River?' Would this be the truth or would it be gross deception.

"The stream of water that forces your furnace into operation is 'Oil Creek'—not the Land. That tract, through the revolution of many years, has been known by different names, to wit: 'Cornplanter's Camp,' 'The Gift,' 'Allegheny Township' and again, by your laws—'Cornplanter.' I never gave it any of those names, but left that course to others because, although by principle as well as station, I am a high Aristocrat, the assumption of a *public* name, to my own *private property*, would savor too much of over-stepping aristocracy, and clinging to the skirts of majesty. Me, and my Indians live in 'Cold-spring Township,' you, in 'Cornplanter.' And in Crawford county, there is a gore of land washed on

two sides by the divided waters of Oil Creek; called 'Oil Creek Township.'

"Yours in friendly

"remembrance and brotherhood,

"CORNPLANTER."

The industry reached flourishing proportions in 1842 under the stimulating influence of the favorable tariff. The county was thought to be very rich in iron ore, and this business was expected to add greatly to its wealth and prestige. In 1847 there were seventeen furnaces in blast, which produced in the aggregate twelve thousand tons of pig iron per annum, having a value at that time of three hundred eighty thousand dollars. This was indeed a goodly sum added to the income of the county. It was also a large item added to the difficult problem of transportation at that time. Water power was utilized, and the fuel employed in reducing the ore was charcoal. This, as was also the case in Clarion County, resulted in the destruction of timber in many parts of the county. The amount of capital necessary for one of these furnaces was estimated at twenty thousand dollars. The whole amount invested, when the business was at its height, was probably three hundred and forty thousand dollars.

The type of furnaces, their operation and everything associated with the industry was much the same as has been related of the industry in the county of Clarion. Several of the old furnaces in Venango County remain, and in the case of a few, especially the Valley Furnace, a few miles from Franklin, are in a good state of preservation.

Very likely, the excitement following the discovery of petroleum in the county diverted former interests in the iron industry, much as a new toy would interest a child. However, as late as 1879 there were eleven furnaces in operation, employing approximately four hundred men. There was a foundry at Utica and a forge at Franklin, and three others under construction in the county. At the same time there were about fifty sawmills and fifty gristmills; five woolen factories and a number of fulling mills, carding machines and oil mills in the county.

Another branch of the iron business was the Franklin Rolling Mill, embracing a nail factory. This was erected in 1843 and continued in operation until 1850, when the general failure of the iron business caused it to go out of operation. The establishment was carried on under the firm name of Nock, Dangerfield & Company, with some Franklin men associated with it. About five tons of bar iron and three of nails were manufactured daily. The capital invested

was about \$60,000. The power and buildings were later used for a barrel factory, tag factory, and still later as a tannery.

About August 10, 1942, a two-ton block of cast iron, salvaged from the ruins of a century old, historic blast furnace once owned partly by President McKinley's father was sent on its way to steel mills to aid in the war against the Axis.

Wilson Shollenberger, present owner of the property, dug the big casting out of a slag pile, where it had lain at least eighty-seven years, and sold it for scrap.

The furnace, five miles east of Greenville, was put in blast in 1839 by William McKinley, Sr., and Joseph Green Butler, an iron-maker, who was attracted to Mercer County by the numerous deposits of native bog ore and the abundance of timber suitable for conversion into charcoal, then universally used for smelting.

To this day the workings are known as the "Harry of the West Furnace," the name given in honor of Henry Clay. The statesman was known as "Harry of the West" in his heyday.

The iron trade had its ups and downs and partners Butler & McKinley sold it in 1845. A subsequent owner had no better luck. After the sheriff took over the plant in 1855, the furnace went out of blast and was never revived.

Joseph Green Butler, Jr., born on a farm near the plant, became a noted ironmaster of Youngstown, Ohio, and president of the Iron and Steel Institute of America. Both he and President McKinley, as boys, were employed in their fathers' ironmaking operations. The assassinated President, who attended Allegheny College at Meadville, was a clerk in one of the operations not far from New Wilmington.

One of America's Outstanding Industrialists—General Charles Miller died at his home in Miller Park, Franklin, at the age of 84, on December 20, 1927. He was born in Alsace, on June 15, 1843, when it was a part of France, prior to its annexation by Germany in the War of 1870-71. He came to America when a boy in his teens. He frequently mentioned that the first real work he had was selling sewing machines. This was shortly after he came to Franklin. We have related his identification with the petroleum industry in which his phenomenal success proved that he was a super salesman.

He was instrumental in having the New York Central Railroad build the Jamestown, Franklin & Clearfield Railroad thirty-seven years ago. This road cost several million dollars and was a forty-five-mile engineering feat, piercing the hills of Venango and Clarion

counties and tapping a rich coal territory. The road was a paying proposition for many years. Then when competition with other roads developed and automobile traffic curtailed receipts, the passenger service was finally dropped. He was president of the Lake Erie, Franklin & Clarion Railroad, operating from Clarion to Summer-ville, and, under his direction, real development came about in the coal industry and manufacturing.

For twenty-five years he was actively identified with the American Steel Foundries, being chairman of the board, and regularly each month attended the meeting of the directors when they convened in New York.

He was instrumental in bringing to Franklin many of the larger industries and was identified with almost all of the Franklin industries in some capacity. He was president of the General Manifold & Printing Company for many years and one of his sons, J. French Miller is now president of this company. He was also president of the Evening News Printing Company until its merger with the "Venango Daily Herald" in 1919. This company was succeeded by the News-Herald Printing Company, publishers of the "Franklin News-Herald," one of the best newspapers in any of the smaller cities of the country. The development of Miller Park, a beautiful residence section of the city of Franklin was one of his outstanding accomplishments and it has often been acclaimed as one of the beauty spots of Pennsylvania. The Franklin Manufacturing Company, manufacturers of asbestos products for the railroad and other industries, was another of his interests which for many years gave employment to a large number of people.

The Miller & Sibley stock farm in the late nineties and early part of this century was one of the leading farms of its kind in the country. This farm produced pure bred Jersey cattle which took first prizes at every World's Fair during its career, and also many famous trotting horses. About twenty-five years ago the site of the stock farm was donated to the city as a public playground by General Miller and Joseph C. Sibley, his partner, and the place now bears the name of Miller-Sibley Field.

During his latter years General Miller conducted the Rosemont Farm, adjoining Franklin and his home in Miller Park. It has figured every week or so in high grade tests of the American Jersey Cattle Club as excelling in production of butterfat and high grade milk. The farm has frequently sent out carloads of cattle which visited fairs in many places and carried off many prizes. This farm is now managed by one of the General's sons, Clarence A. Miller.

For many years General Miller maintained at his own personal expense a night school in Franklin which proved the starting point for many successful careers of young men and women. The advantages of this school were numerous and were available without any cost whatever to the students.

He was one of the founders of the First Baptist Church and took an active interest in it until his failing health prevented him from attendance. The Miller Bible Class at one time had more than a thousand members and was known throughout the Nation. Associated with it was an orchestra which comprised the outstanding musical talent of the city and which rendered many excellent concerts.

General Miller attained his title of major-general in the Pennsylvania National Guard, serving two terms as commander of the division which included all the troops of the State. He was a veteran of the Civil War and for thirty-seven years consecutively was commander of Mays Post, No. 220, Grand Army of the Republic in Franklin, a distinction not held by any other Civil War veteran. For about twenty-five years he financed the trips of the local Civil War veterans to national encampments, two or three times to California, to Denver, Salt Lake City and other cities; a member of the Mays Post estimated the cost of these trips at nearly \$30,000.

He built the first modern hotel in Franklin, now known as the Park, the original name being "Alsace" after the French province in which he was born. The Evening News Building, now known as the News-Herald Building was erected during the time he was president of the Evening News Printing Company and constructed of the same brick as that used in the Park Hotel which is on the adjoining lot. He also built the Miller Apartment Building nearby and also nearby stands the former office building of the Galena-Signal Oil Company, one of the best built and finest office buildings in the country. He was for many years the principal owner of the Hotel Latham in New York City. His private car "Franklin," on which he made trips to other cities for a considerable time, was one of the few private cars in frequent use in the country. He was designated as a Chevalier of the Legion of Honor of France, a coveted decoration, and he was ever proud of this distinction.

General Miller's last public appearance at any gathering was on November 15, 1927, on the occasion of the presentation of the International Petroleum Exposition medal to Jacob Sheasley. This ceremony took place in the Chamber of Commerce offices, and General Miller made a brief address, telling several incidents of the development of the oil industry.

CHAPTER VII

Transportation

It is almost axiomatic that adequate transportation is one of the most potent factors in the development of localities. At the very beginning there could be no settlement of a place, if the would-be pioneer could not get to it with some of the necessities of life, and send from it some of the surplus of his production, agricultural or industrial. The Indian trails and the streams became the first highways of the white man. Waterways were plentiful in most parts of early northwestern Pennsylvania, with some of the rivers navigable by fair-sized boats. The canoes of the aborigine had traversed them from time immemorial. The Indian paths to, and along, the streams and through the woods, required only occasional widening to become the "horse-ways" of the first settlers and their pack-horses laden with sacks and panniers filled with meagre possessions. Later these trails and horse-ways were broadened to accommodate carts—and the ancient path had been transformed into a road, the forerunner of modern means of transportation.

It may be that our tributes and praises should go to the larger animals of the forests and dales as the primitive engineers of our highway systems. Perhaps it was they who first laid out the routes of the Indian and the white man's migrations. The denizens of the woods had a certain instinct for easy paths to sweet waters and fertile areas, salt licks and their abiding places. There are faint traces of wild animal trails still extant which seem to antedate the mound builders. The Indians followed and hunted game, one of their main sources of food and raiment, and made some use of the fertile places along the paths trodden down by the animal dwellers in the forest and field. A contrary view is, that because of the war-like character of the northern Indians, they, in many instances, shunned the easy natural levels and went directly on their raiding campaigns by the most direct routes, especially those which took

them frequently to high points where they could signal to other members of their tribes or confederation what they had seen or done, warnings of danger, the direction of their trail or the movements of those who followed.

The life, customs and travels of the Indian in the northwestern part of Pennsylvania have been discussed at length and with authority in the earlier chapters of this work. There also has been outlined the routes which the explorers of this region followed, especially those traversed by Céleron de Bienville on his journey of 1749 to confirm the claims of possession of this region by France. The story of his trip is particularly enlightening because he followed the old aborigine trail down the Conewango River to the Allegheny, and from the present site of the city of Warren went southwest to the Ohio River. It was a route used for a century after his passing. The most serious drawback to this route and many others, whether they were based on Indian paths or the streams, was that they ran naturally from a north to south or made their ways in a northeasterly to a southeasterly direction. The tides of migration were more nearly east to west, except when they met with such large obstructions or aids as Lake Erie. Perhaps these were among the reasons for the comparatively late and slow development of much of northwestern Pennsylvania, after the American Revolution.

In the closing decades of the eighteenth century there had been visitors to the "West" which was then Ohio and that region bordering the Great Lakes, known eventually as The Northwest Territory. From the expeditions of Bouquet and Bradford, in 1764, to later ones of the 1770s, there returned men who told wondrous tales of the fertility and beauty of the then distant region. Each of the twenty-seven forts established in the future State of Ohio became a publicity bureau, working upon the imaginations of the land-hungry in the East. Hence it was that, after the organization of the new and vigorous Nation, folk stopped long enough in their occupations to listen and to heed. The more adventuresome or just footloose responded to the urge to go West, and there began a great trek from the coastal thirteen colonies to the land of milk and honey. At first the pioneers came in tiny streams, gathering strength as they neared their destination. Eventually there were great rivers of migration. Unfortunately, there were few to speak of the advantages of northwestern Pennsylvania, and even more disastrous was the fact that this country lay between the middle Pennsylvania routes and the middle New York routes, so that while those traveling the latter became

squeezed between the barrier of Lake Erie and the lower trade paths to the Ohio, little of the flood remained in the country that in 1800 was erected as Erie and the upper tier of northwestern Pennsylvania counties. Then the War of 1812 deterred many from settling near Lake Erie. Even when the Erie Canal was opened the trend of migration was toward the fabulous prairies of the Northwest Territory. The western counties of upper Pennsylvania, however, slowly but surely gained more or less permanent citizens. So also did Warren and Venango counties suffer because the Allegheny River



(Photo Courtesy of "Clearfield Progress")

Winter View of Covered Bridge at Curwensville

provided a good route to the Ohio River and Pittsburgh. Clearfield, Jefferson and Clarion counties were too far south to be on or near one of the early highways to the West. To a large extent northwestern Pennsylvania continued relatively unknown and meagerly populated until the roaring forties, the golden fifties and the post-Civil War sixties and seventies.

When at the beginning of the nineteenth century counties were formed in northwestern Pennsylvania, one of the first duties of the county governments was to listen to petitions for improvements of local roads, most of which had been started as simple unimproved

connections between one small settlement and another, or even from a tavern to a mill. Many of the newcomers had lived in the thirteen original colonies where, as early as the sixteen hundreds, there had been "King's Highways." Theoretically these were established and maintained by the King of England, although nearly always paid for by the colonials. State roads came in with the formation of the Union, and then, and ever after, the help of the Nation and the Commonwealth was sought in building the longed-for means of transportation. Immediately after the creation of the United States, one of the chief activities of the separate states was the building of main highways. That part of the present Lincoln Highway from Philadelphia to Pittsburgh followed sections of the old Indian Trail, the Forbes Road of 1758, and parts of the old State Road of 1785, but with many changes. On March 8, 1806, the Congress of the United States authorized the construction of a road from Cumberland, Maryland, to the Ohio River. This Cumberland Road or National Pike cost several million dollars (\$6,821,246) and was extended far into Illinois. It is one of the historic highways in the United States, but identified with northwestern Pennsylvania chiefly by a road built to connect with this famous pike. Before the completion of this highway in Pennsylvania, the Legislature had tried to join the more northwestern sections of the State with Philadelphia. An enactment was passed that authorized the opening of a road from Presque Isle to French Creek; and in 1795 another law was enacted for a road from LeBoeuf to the Juniata River. In 1796 Andrew Ellicott located the Susquehanna and Waterford Turnpike from LeBoeuf to Curwensville, in Clearfield County, it going through Meadville and Franklin.

The Philadelphia and Erie Turnpike, or the Erie Pike as it was known to many, was the chief thoroughfare through the northern tier of counties for many years. Only the later construction of railroads and the "Lakes to Sea Highway" displaced its importance. It should be pointed out that these highways were not "state" in any real sense. They were pike roads, built by companies chartered by the Commonwealth, and were private enterprises. Most of these pikes had toll gates every four or five miles, and at each the traveler was compelled to pay according to the type of vehicle and its load that he was using. Taverns were located all along the route; the first stagecoaches traversed the pikes; and the early post offices were supplied by various methods of transportation. Every early history of the counties of Pennsylvania, and other states for that matter,

gives a large amount of space to the turnpikes of the early nineteenth century. Hundreds were built; speculation in the companies was high; and for a time the toll road flourished and was of immense benefit to otherwise distant communities. The turnpike fever was cooled by the canal era and the later craze over railroads.

We are much too far ahead of our story, chronologically, and it may be well to make a detour to an early and late procedure. For more than a half century after the establishment of counties in northwestern Pennsylvania, the streams navigable by logs, rafts or scow boats were declared public highways by the Assembly. We reprint in full a transcript of an Act of April 14, 1828 (PL 478), which concerned McKean County more than any other region:

"An Act declaring the Tununguant creek a public highway, appr. April 14, 1828, PL 478.

"Be it enacted &c that from and after the passage of this act Tununguant creek in McKean County from the New York State line up the stream to the junction of the west branch one mile and up the south branch two miles from said junction, be and the same is hereby declared to be a public highway, for the passing of rafts, boats or other crafts, and it shall and may be lawful for the inhabitants desiring of using the navigation of said creek, to remove all natural and artificial obstructions from the bed or channel of the said creek, except dams for mills and other water works, and also to erect such slopes at the mills or other dams in said creek as may be necessary for the passage of rafts, boats or other vessels; *Provided* such slope be so constructed as not to injure the works of or attached to such dams; *And provided also*, that any person or persons owning or possessing lands on said creek, shall have liberty to construct any dam or dams across the same, agreeably and such to all the restrictions and provisions of an act of the General assembly of this Commonwealth passed the twenty-third day of March, one thousand eight hundred and three, entitled 'An Act to authorize any person or persons owning lands adjoining navigable streams of water declared public highways to erect dams upon such streams for mills and other water works.'"

From 1791 to 1793 there were a number of efforts made to legalize and construct what has been called the "oldest white man's road through the northwestern wilderness." From 1788 until this

highway was completed the Indian path was about the only other important endeavor to improve transportation in these parts. The "path" in question was usually known as the "Mead Trail," supposedly surveyed by General Mead. The surveying, by the State, of Erie Road was delayed by Indian troubles of 1791 to 1794, which stopped all real work, but during 1795-96 the aborigines had quieted down and legal steps got under way looking to the building of a road between Bald Eagle's Nest, on a tributary of the Susquehanna, to LeBoeuf, in what became Erie County. To clarify further remarks in this paragraph, let it be remembered that LeBoeuf is now Waterford, not far from the city of Erie, and Bald Eagle's Nest (or Eagle) Nest, is not only the name of a creek, but is the former name of Milesburg, in Centre County, in the vicinity of Bellefonte.

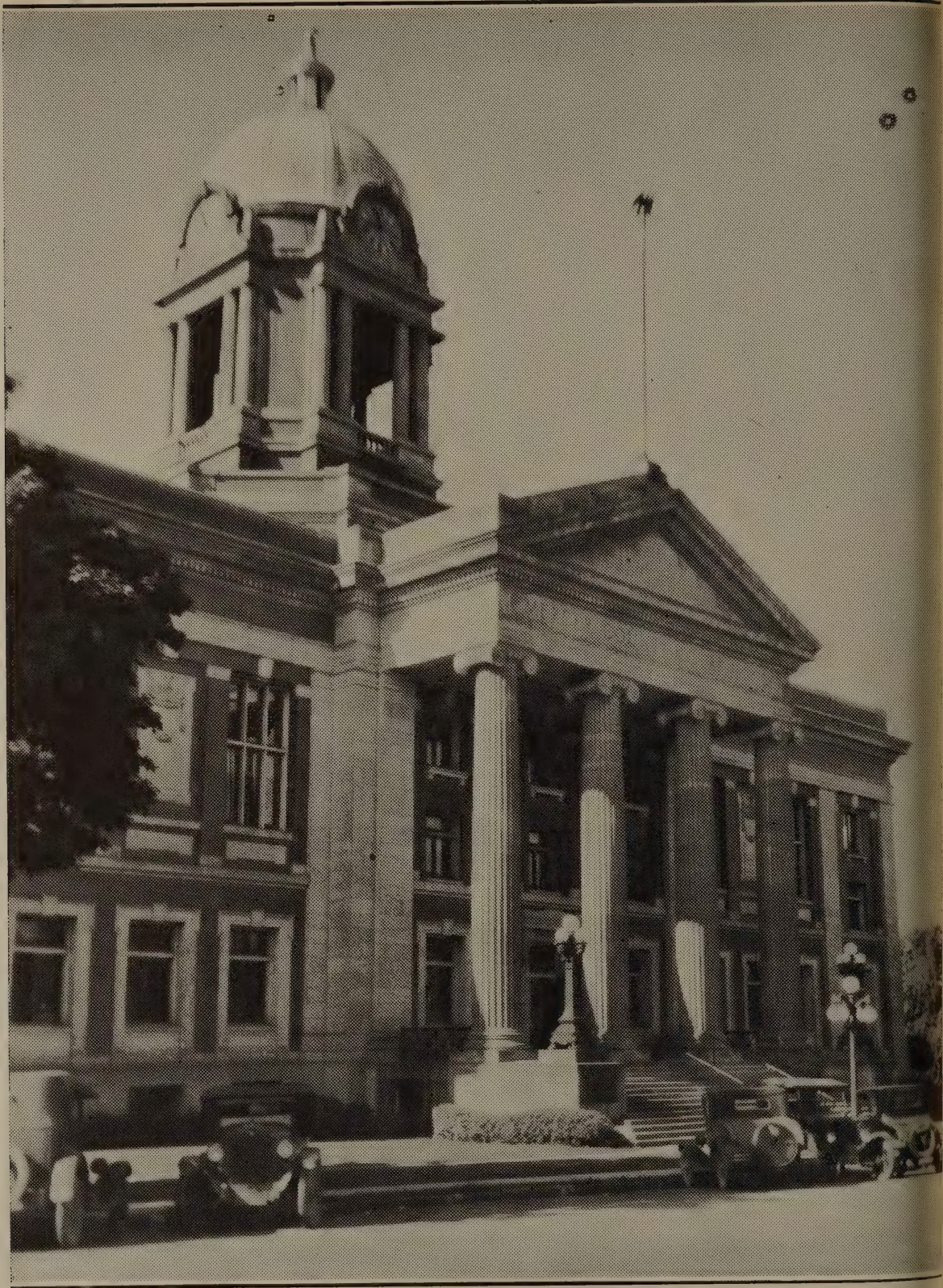
The reason given for the creation of the above road was for the purpose of "protecting the frontier from the British and the Indians," and the national authorities were seriously interested in the project. On February 28, 1794, the Pennsylvania Legislature passed an act for "raising soldiers for the defense of the western frontier." In that same year the United States and Pennsylvania tried to lay out a town at Presque Isle (Erie). Since 1788 about the only route except from the lake, from Fort Pitt (Pittsburgh), had been the "path" to LeBoeuf, and thence to and up the Allegheny River. On March 1, 1794, the Legislature made plans for laying out a route from Reading to Presque Isle, Colonel William Irvine and Andrew Ellicott being appointed commissioners, with Captain Denny to be in command of the military forces. This was under a contract signed by Governor Thomas Mifflin. At about Franklin, in what is now Venango County, strong opposition was met from the Indians to both the laying out of a road and the settlement by white men. The whole group was ordered back to LeBoeuf and took possession of two blockhouses erected with the possibility of trouble in view. The President of the United States was asked for at least a thousand soldiers to force the way through the wilderness, but the President counseled peace and thus came to an end the first serious effort to open up the "Northwestern Wilderness" for settlement.

In April, 1795, the commissioners resumed their work, and by the autumn of 1796 a road had been constructed (if such a word could be used in connection with what was little more than a blazed trail) for a distance of about 116 miles from Bald Eagle's Nest. The cause of the stoppage here was not Indians, but gnats and flies

that "killed the horses" and evidently so discommoded the contractors that they quit. The contract was officially taken away on April 2, 1804, from Samuel Miles and Rodger Allen, to whom it had been given on July 3, 1799. At any rate the road from Milesburg (Bald Eagle's Nest) to Waterford (LeBoeuf) was declared open to traffic in 1804.

If one desires to learn more about this primitive road and what a terrible affair it was, he is referred to "The Report of Inspector, Jno. Fleming," of December 16, 1801, large excerpts of which are quoted by Thomas Lincoln Wall in his fine history, "Clearfield County, Present and Past," McKnight's "Northwestern Pennsylvania," and other historians. They all agree that it was of the most primitive "corduroy," cross-laid poles or logs or planks kept wagons and animals from sinking in the swamps and wet places in the deep woods; bridges were prospects rather than realities; and it was twenty years before it was possible to cross the Allegheny near Tionesta, Forest County. Incidentally the old road was north of some of the leading cities and boroughs in the northwestern Pennsylvania counties. It was not until 1824 that a privately constructed turnpike more or less paralleled this route diagonally across northwestern Pennsylvania.

The turnpike as differentiated from the State road was a Heavensent gift to the pioneer settlers and local land speculators. Conditions in transport were so difficult and the provisions made by the Legislature so inadequate that the promises of a smooth-speaking promoter with a scheme for the construction of good, sometimes hard-surfaced, highways were accepted with public celebrations and the liberal investments by capitalists, even those of the few-dollar variety. Imagine the hope it held out to the man just producing his first surplus crop of wheat and other grains; the pot-ash, or its salts, which he had saved from the burning of forest trees; his whiskey, either potato or grain, made in a primitive still; or the things he could collect and ship; and the simple, but numerous, personal necessities which he wanted to bring in to his home—all this and more, if there were only good roads with lower freighting costs and saving of time. The fly in the ointment, seldom perceived as a rule by our forefathers, was that for every improved road expenses ran high, and only those who held stock in a sound turnpike company realized how large would be the tolls. Without tolls there could be no financing of turnpikes; without turnpikes the development of districts would be vastly retarded or prevented.



(Courtesy of the Mercer County Dispatch and Republican)

Court House of Mercer County
The County's Third Building, Dedicated in 1911

In Colonial times privately financed roads were common, and built without requiring special permits or charters. From 1792 to 1832, the Commonwealth of Pennsylvania granted charters for 220 turnpikes, not all of which, however, were completed. In northwestern Pennsylvania, what might be called the pioneer turnpike of length, was one from the Susquehanna River to Waterford, the charter for which was granted by the Legislature on February 22, 1812. That happened to be a very inopportune time, for the War of 1812 not only brought about a widespread business depression, but a discouragement of settlement in the lake regions of Pennsylvania and New York that lasted for quite a number of years. It likewise delayed the development of the above turnpike for six years, the survey not being completed until October, 1818. Two years later the highway had been constructed so far as Bellefonte. In November, 1824, the Susquehanna-Waterford Turnpike, or the Philadelphia-Erie Turnpike, or the plain Erie Pike (it was known by many titles), was ready for public use. It was the main thoroughfare from the easternmost county of northwestern Pennsylvania (Clearfield) to its westernmost limit (Erie), until replaced by the modern Lakes-to-Sea Highway.

Every county had dozens of these turnpikes—one authority estimates their total number as above five hundred in northwestern Pennsylvania. Nor must it be thought that the turnpike has passed completely as a type or system. There still is the Pennsylvania Turnpike Commission, created by an Act of 1937, "with the authority to construct, finance and maintain a *toll* highway" through certain counties of the State, none of which, however, are located in the northwestern part of the Commonwealth. Although construction had hardly been commenced in 1939, already more than forty million dollars in bonds had been sold, and there was also a WPA Federal grant of nearly thirty million dollars. This turnpike had entered the field of high finance as a Second World War broke upon the horizon of international affairs.

Frankly, the old Erie Pike was a mighty poor highway, although it served the northern Pennsylvania counties in the west for a long period. Originally toll gates at distances from five to ten miles along the route demanded payment or no passing. The tolls were determined by the type of vehicle, load, number of persons and what-not. Only the commonest of goods could be freighted over it, for the rates were high, six dollars per hundred pounds over long dis-

tances. Poor work by contractors, dishonesty by officials, and the eager endeavor to make profits on inflated capitalization, all made for the capture of much of what the farmer-industrialist earned. Yet this was the day when wheat and the other grains brought prices almost equal to the inflated prices of 1942. Such items as sugar cost thirty-five cents a pound in the common variety and fifty cents if white (loaf). Money had a double or more purchasing power in the first half of the nineteenth century, but the profits of the small town and country industrialist-farmer were cut savagely by the turnpike and its speculative builders.

Among the factors entering into the gradual fading of the privately financed turnpike, the two that were the most important were the canal and the railroad. Canals were the first important competitors of Pennsylvania land thoroughfares. Those actually built in northwestern Pennsylvania affected its transportation and commerce but little, except in the counties of Erie, Crawford, and Mercer. These were sections on the north-south natural route between Lake Erie and the Ohio River. As early as 1762 the grandiose scheme of connecting the Delaware River with Lake Erie was proposed, and from time to time the smaller project of a ditch from the Ohio River at Pittsburgh to Lake Erie at Presque Isle was publicized. The reasons given were "to protect the frontier." In 1790 Governor Mifflin appointed commissioners to "view the western waters," including the streams entering Lake Erie, French Creek and the Allegheny River. While the idea was vigorously discussed, it was not until 1822-23 that the Pennsylvania Legislature authorized a survey of the country to see if the project was practical. In 1824 Federal appointed engineers made the examination, and after long and bitter debate the so-called "Western Route" was chosen over the "Eastern Route." The terms had only to do with one way which would have extended east to Franklin, in Venango County and the Allegheny River, or the "Western Route," from the Beaver River to the Shenango River. The choice of the latter was exceptionally fortunate in the development of the Shenango Valley (which was without transportation facilities until the railroad era), and the counties of Crawford, Mercer, and Erie. No doubt it also had a great deal to do with the sharp increases in population after the completion of this canal in the 1840s. The census of 1850 credited Crawford County with 37,849 people; Erie County with 38,742; and Mercer County with 33,172; each larger than any one of the other counties of northwestern Pennsylvania. Their two bordering

counties to the east, Venango and Warren, possibly better suited for canal purposes, remained relatively static during this period, showing populations in 1850 of 18,310 for Venango and 13,671 for Warren. In 1820 Venango had been two-thirds as populous as Erie County.

Without going too extensively into details, let it be stated that so late as 1831 the Pennsylvania Legislature continued its indifference to the so-called "Lake Erie Extension of the Pennsylvania Canal." In protest a public meeting was held in the Mercer County Courthouse, on May 21, 1832, by delegates from the counties involved. Those present urged the completion "of that portion of the line which will connect the city of Pittsburgh and the Harbour of Erie, it being necessary to enable the East (?) to share in the advantages of the West, and to complete the original design of connecting the waters of the Delaware with the western lakes, and to secure to our great eastern emporium the trade of the northwestern country." This noble effort to contribute to the wealth and benefit of the East found support in a message of Governor Wolfe, in December, 1834, referring to this appeal of northwestern Pennsylvania. During the administration of Governor Ritner (1835-39) an appropriation for the construction of the canal was made. In January, 1842, Governor Porter informed the Legislature that the waterway had been completed, "from Beaver, on the Ohio River, to Greenville, a distance of $72\frac{1}{4}$ miles, and that the Erie Extension north to Erie Harbor was in progress and nearly completed for a distance of $63\frac{1}{2}$ miles. Already four million dollars had been expended on the undertaking, and the further cost would only be two hundred and eleven thousand dollars." The Commonwealth was ready to give the works up, and the Legislature of 1842-43 ceded the whole proposition to the fully incorporated Erie Canal Company, on the condition that the corporation finish the job. It did so, and on December 5, 1844, the first boats arrived at Erie from the south. They were the "Queen of the West" and the "R. S. Reed," the latter named for Rufus S. Reed, of Erie, president of the corporation, and chief stockholder.

There need be no deceptive notion that this northwestern Pennsylvania "Erie Canal," by whatever of the several names it was known, was any large affair except in its relation to the further settlement of "The Wilderness." It could carry no large tonnage, but slow as was the speed of canal boats, such transportation was better than ox teams, the laboring wagon, or even the stagecoach. The canal boat accommodations were preferable to those of a coach

rattling along rough roads. The canal more or less decreased the importance of the overland road, and it certainly improved intercourse between parts of several counties. Towns were built along its line, and those already located were benefited. The use of coal was increased, as was the founding of iron furnaces. Land speculation expanded largely, to the enrichment of a few, but there was an associated development of agricultural-industrial enterprises that made the initial cost of speculation worth the while. For twenty years the canal served as the main route of transportation in the counties it passed through, and provided the grades and roadbeds of the railroads of a later period. In the end its usefulness was destroyed by the railroads that purchased the majority of the stock held by General Rufus S. Reed, and all efforts to maintain or improve the canal were checkmated by these corporations. In 1871 the aqueduct which conveyed the waters of the canal over Elk Creek, in Mercer County, was destroyed by accident or design, and when the railroad refused to rebuild, the canal was abandoned. The big ditch became choked and the locks were dismantled, and thus came to an end another of the interesting periods in the history of transportation in northwestern Pennsylvania.

It is doubtful whether any writer will ever attempt a history of the development of railroading in this corner of Pennsylvania. County historians have tried it and compiled long chapters concerning beginnings. Combined these would make a large volume, without bringing the subject down to the present day, or even century. The story of the railroads in the United States is like that of the turnpikes, in that they were based on private enterprises and speculation after the manner of American initiative, the foundation upon which the wealth and growth of the Nation have been erected. The individualistic methods may have been costly, with the accumulations of the first investors frequently lost, but they brought results which the slower moving State and National governments could not equal. As with other modes of transportation they came into existence piecemeal, short lines supplying local needs. Eventually there were costly periods of competitions, combinations, high finance and the squeezing of the public—governmental and individual. But out of it all grew a network of rails that in the different terrain of most of northwestern Pennsylvania penetrated into almost every corner.

In general, the railroad era started in the 1830s, although very little was accomplished until early in 1842. Like the highways and the canals, the western tier of counties—Erie, Crawford, and Mercer

—and to a lesser degree Venango and Clarion, came to the fore, the object of the pioneer promoters being to secure lines to the Ohio River and to Pittsburgh. In Fredonia, Chautauqua County, New York, a railroad meeting was held in 1831, with several interested people from Erie in attendance. On September 2, 1835, a similar gathering was held at New Wilmington, Mercer County. Crawford County men were talking about rail transportation in the same decade. While the creation of rail systems in other counties came later, for the most part the railroad fever early ran high in several of them, but receded under the practical problem of financing rails to small towns and still undeveloped natural resources. The "petroleum boom" of post-Civil War times was the impelling force behind the construction of many lines in the middle counties of northwestern Pennsylvania, although one must not overlook the influence of the bituminous coal industry, that, so far as rail traffic is concerned, provides larger totals annually than oil.

To return to Erie County for illustrations of the difficulties and delays in early railroad building enterprises: On April 12, 1842, after nine years of discussion, Charles M. Reed, John A. Tracy, and John H. Walter secured a charter for the first railroad in Erie County, called the Erie & Northeast Railroad Company. Not until October 16, 1846, was stock offered to the public, and not until July 26, 1849, were contracts let for the construction of a line between Erie and the New York State border, at Northville. This company contracted for a connection at the State line with the Dunkirk & State Line Railroad for a road (or roads) from Buffalo. The confused and impractical conditions of local railroading is well indicated by the fact that the northern line used a six-foot gauge, and those in Erie County had a standard gauge of four-feet-eight and one-half inches. This meant the reloading of freight cars at Erie and a serious impediment to further development.

The first line built west from Erie, constructed by the Franklin Canal Company, was narrow gauge, upon which ran the first train from Erie to Ashtabula, starting the morning of November 22, 1853. In November of the following year agreements were arrived at by which the Erie & Northeast Company and the Buffalo & State Line railroads would adopt the four-foot plus gauge, thereby providing an almost common gauge from Buffalo to Cleveland, Ohio. The job was completed on February 1, 1854, and the first through train between these two cities operated. This great event was not held as cause for rejoicing in the growing city, Erie, for many of its peo-

ple believed that when the railroads made it possible for trains to run through the community, unstopped by differences in the width of the track, it spelled the doom of local prosperity and growth. There was some truth in the contention that when Erie ceased from being a terminal of the several pioneer lines, it did become something of a way station and expansion of business and population was not commensurate with its splendid location and natural advantages. The city fathers had their revenge, however, for they repealed a provision whereby the Erie & Northeast Railroad Company could use State Street to the Lake, and the Franklin Canal Company was privileged to lay rails in the city streets. This revoking resolution made it perfectly clear that the "City Council will at all times be ready to grant all facilities in their power to railroads terminating here, when the same will promote the interests of this city, when the policy of such railroads shall become settled and fixed with regard to width of track, etc." "The War of the Gauges" has been told at length by several historians of railroading in the early days of Erie, partly because it was a classic example of one of the difficulties of the piecemeal construction of the Nation's steam railways. Briefly, the railroads and the city council stuck to their guns. There were many indignation meetings held, and not all were against the common or "standard" gauge. The mayor was ordered to increase his police force and to "remove from the streets of the city all bridges, tracks, embankments, ditches, timbers and other constructions or obstructions placed in them by the railroads." On December 7, 1853, the mayor and a force of 150 special police, together with a wild crowd of citizens, drove away the railroad men and sawed off parts of bridges that crossed streets, or destroyed them altogether. Outside the city farmers and villagers tore up tracks and did all sorts of damage. Hundreds were jailed, the Pittsburgh courts were crammed with cases, a local newspaper that took sides with the railroads had its home burned, the very name Erie became a by-word for all that was evil and the city was shunned by the traveling public. Only the bigger conflict, the Civil War, stopped the fighting and assuaged the wounds.

Whatever the rights and wrongs of this "most disgraceful thing in the history of Erie," as viewed in retrospect, there are certain good things that came from it. For example, it prevented the modern New York Central from running its trains through the chief street of the metropolis. Closer to that period is the fact that conditions were created by the strife that encouraged the construction

of the great railroad from Philadelphia to Erie, and inspired the building of the Erie & Pittsburgh line. Consolidation of railroads increased and the trend to the use of a standard gauge was promoted throughout the land. Perhaps some riots and destruction of property served several good ends, and it should be explained that the principal cause of the bad name Erie attained at that time with the traveling public was the fact that the said traveling public had its



Mercer County's First Court House

very unpleasant troubles in getting from east and west across the city where rail facilities had been torn out.

The tale of the "Gauge War" is but one of a thousand stories that engaged the attention and filled the front pages of newspapers. Each little way station welcomed the first train along the new line to their future metropolis; crowds waited for hours to hear the tooting whistle of the first iron horse that many had ever seen. Public celebrations of the great day were the rule and at each station some orator gave a full account of how this gift of the gods had been brought to whatever town in which he was speaking. T. L. Wall, writing in the 1920s:

"When the first railroad entered the county, the engines were small and not very powerful. There were only hand

brakes on engine and cars, not air brakes as now, and when it was necessary to slow down or stop, the engineer whistled for brakes and the brakeman hurried out and twisted the brake wheel by hand.

"At that time live stock of all kinds ran at large and were quite liable to wander onto the track, be struck by the train and possibly wreck it. In some localities cattle owners went together and formed local companies to insure their cows.

"Cars, both freight and passenger, were small and were coupled together with link and pin, instead of the automatic couplers as now. Passenger cars were heated with stoves, it being a part of the brakeman's business to see that the fire was kept up.

"When the railroad first came to Clearfield in 1869 and for quite a while later, there was only one passenger train a day each way, and it ran much slower than trains run now. Since the building of improved roads and the use of autos, trucks and busses, local traffic on the railroads has been somewhat curtailed.

"When the Tyrone and Clearfield was about to be extended to Curwensville in 1874, the Clearfield borough authorities, for some reason, refused to allow the railroad to be built up Third Street through the borough, whereupon the company resorted to strategy in order to put the road through. The story as told by the conductor of a coal train that was pressed into service to help the work is substantially as follows:

"One afternoon this conductor was called and told that the next evening he was to bring his engine, caboose and crew over to Philipsburg, which he did. Here he found a number of flat cars loaded with ties, rails and everything else necessary to build a railroad. A little later the regular work train and his train, with a big crew of men for work, pulled out for Clearfield, where they arrived quietly at about ten o'clock at night.

"In that day of 'early to bed, etc.,' and no electric lights, the people of the town were, by this time, practically all sleeping soundly, so that work could go on without interference, and the crews went immediately at it.

"Ties were put down, rails laid and spiked and when the borough authorities awoke next morning, a train had been

run through and was standing at the upper end of town, while the track laying was proceeding steadily towards Curwensville."

At the time Wall wrote his little story (1924) there were about four hundred miles of railroad in Clearfield County.

Of the many lines built or projected in the twelve counties with which this publication is primarily interested, not even an attempt can be made to name them. They were hundreds in number and most of the old names have disappeared except as branches of large systems. Many of the roads themselves have been abandoned because the reason for their being passed—such as shifts in oil and coal production.

In 1940 the main railroads serving northwestern Pennsylvania were in:

Cameron County—The Pennsylvania and the Buffalo & Susquehanna.

Clarion County—The Pennsylvania, the New York Central, the Baltimore & Ohio, and the Lake Erie, Franklin & Clarion.

Clearfield County—The New York Central, the Pennsylvania, the Baltimore & Ohio, and the Buffalo & Susquehanna.

Crawford County—The Pennsylvania, the Bessemer & Lake Erie, and New York Central.

Elk County—The Pennsylvania, the Baltimore & Ohio, the Pittsburgh, Shawmut & Northern, the Buffalo & Susquehanna.

Erie County—The New York Central, the Nickel Plate, the Pennsylvania, the Bessemer & Lake Erie, and the Erie.

Forest County—The Pennsylvania, the Baltimore & Ohio, the Tionesta Valley, the Sheffield & Tionesta, and the Hickory Valley.

Jefferson County—The Baltimore & Ohio, the Pennsylvania, the New York Central, and the Pittsburgh, Shawmut & Northern.

McKean County—The Pennsylvania, the Baltimore & Ohio, the Pittsburgh, Shawmut & Northern, the Erie, the Valley, and the Coudersport & Port Allegany.

Mercer County—The Pennsylvania, the New York Central, the Erie, and Bessemer & Lake Erie.

Venango County—The Pennsylvania, the New York Central, and the Erie.

Warren County—The Pennsylvania, the New York Central, the Erie, the Sheffield & Tionesta, and the Tionesta Valley.

The care of these rail systems has created an important local industry. There are twenty-three repair shops in the twelve counties; even the two least populous counties being represented in this business.

The electrically-powered railroad, whether local street railway or inter-urban in service, played a small but, for a time, an exciting part in the history of transportation in northwestern Pennsylvania. Great things were expected of it, but it failed to live up to promises. One does not have to be so very old to recall reading about a group of New York, Boston and Philadelphia street car magnates going to Richmond, Virginia, "City of the Seven Hills," to witness the trial of an electric trolley car. To their amazement they saw a little wobbly contraption come out of its barn and wind its way up and down the hilly terrain of the Virginia city, without animal or steam power. A slanting rod or pole stuck out of the top of the car, contacting an overhead wire which supplied the invisible power. The strange "toy" worked, never leaving the tracks, slipping backwards or doing any of the dangerous things expected by the skeptical financiers of the 1880s. Some bolder rapid transit executives returned to their respective municipalities to change horse-driven street cars over to trolleys, and in a surprisingly short period folk got over their fear of being electrocuted, and passenger traffic grew by leaps and bounds. Many rapid transit executives considered electricity the solution of all surface traffic problems.

So late as 1909 a writer in a county history—let both the author and the county go unsung—went on record:

"The application of electricity to transportation is destined to have even more vital bearing on the development of town and country. The electric railroad brings town and country together and abolishes the oldtime distances between urban and rural residents. Competent observers now maintain that electric roads will soon supersede steam roads in the field of local transportation, both freight and passenger. In . . . County the development of electric lines has only begun, and all that has been accomplished in this field has been done in the past decade. What another ten years will bring about can only be conjectured, but it is probable that in another few years the county will have as much electric railroad mileage as of steam roads. As the Shenango Valley was the first part of the county to receive the successive benefits

of canal, and then railroad facilities, so likewise the nucleus of electric transportation was formed there. About ten years ago the first Sharon street railway was put in operation. During the present century electric lines have knit together nearly all the industrial centers of the Shenango and Mahoning valleys. Sharpsville and Sharon were brought together; the Sharon and Wheatland line connected the industrial centers along that route, and Middlesex was also linked into the chain that now binds nearly all the larger centers from Sharpsville south to Pittsburgh. An electric line from Newcastle to Mercer and north to Erie is now planned, but at the present time only the lower part of the Shenango Valley in this county is supplied with this form of transportation."

Fifteen years later, Thomas Lincoln Wall was writing in his excellent "Clearfield County": "There are but two trolley lines in the county, one of a few miles in DuBois and extending to outlying towns, and one extending from Philipsburg through Hawk Run, Morrisdale, Munson, to Winburne." He then dismissed the subject, as have most writers of county histories of 1925 or later. Clearfield was as progressive in the use of electric power in its town and highway systems of transit, except the three lying south from Lake Erie. The city of Erie had a horse-car railway on its streets in 1868. The system expanded a great deal down the years, and almost twenty years later the people witnessed its first electric passenger car. In the spring of 1885, to be exact, this innovation made its appearance on State Street, a final test. It proved successful and other cars were added to the equipment of the Erie Passenger Railway Company. This company was reorganized on October 1, 1888, as the Erie Electric Motor Company, and so functioned until April 13, 1906, when a new group, the Buffalo & Lake Erie Traction Company, took over about half the lines of the old concern, and in August of that same year acquired the suburban and urban lines east on the Buffalo Road to Westfield. In the twenties an electric railway to Buffalo was operated by the Buffalo & Erie Railways Company, which made the purchase of a receivership. The Conneaut & Erie Traction Company was founded in January, 1901, and was later extended to Cleveland, becoming the Cleveland & Erie Railway Company, which in the twenties went bankrupt and was junked. One of the most successful and enduring of the older interurban lines was

the successor to the Erie Transit Company, incorporated April 22, 1891, that down through the following quarter of a century grew from a line from Cambridge Springs to Edinboro, through McLane, McKean, Kearsarge to Erie, and built a branch to Meadville, that eventually became the main line. Connections were made that extended west and south of Meadville.

An interesting sidenote to the history of transportation in northwestern Pennsylvania is the incident that the city of Erie was one of the first municipalities in the United States to try out substituting electricity as a motive power in place of horses, even as it had been very early in establishing street car transit. The latter dates from 1867, although cars were not running in the streets until the following year. It was necessary to fight the omnipresent omnibus, that failed of its own ability to keep going in the face of waning popularity; even a five cent fare did not keep vigorous the enterprise. We are not going to record a tale of the progress of this company, except to mention that it was progressive and soon covered much of Erie with a network of lines, not only within the municipality, but to outlying places. The service rendered to rural districts and towns by Erie transit companies has always been noteworthy, by whatever methods used. Like most pioneers, little money was made by the promoters of the original Electric Motor Company. A cynical citizen of Erie once remarked that a history of rapid transit in his part of the country would be nothing but a story of "from omnibus to bus, speculation to investment, competition to consolidation and liquidation."

It is perhaps fortunate that the most of northwestern Pennsylvania was not particularly attractive to rapid transit promoters, when rapid transit consisted of electrically-powered car lines. This type of public utilities has long been the cause of many headaches and insurmountable difficulties where they still exist, or have been replaced by a later system. It was an immense improvement on the stagecoach, the omnibus or the old horse-drawn street car. The wheels of progress only a decade after the introduction of the electric trolley line began making a "horseless carriage." After the end of the First World War the motor bus became a convenience, more flexible in service, less costly to maintain, and so much within the range of the small personal investor of adventure that the rails of the country electric lines rusted or were buried beneath the surfacing of some highway. This is a gasoline motor age. As we look into the future, and we now round out the first year of our engage-

ment in the Second World War, there is good cause for worry about the next step in transportation from one place to another. No rubber for the tires of the average citizen, the expectation of constantly reduced tires for buses and public conveyances, no automobiles being made for civilians—did we scrap the beloved trolley car too



Clarion County Court House

soon? Must we go back to the horse and buggy days? Must we walk the splendid roads like the Indians who traced with their own feet so many of the trails that the engineers of a later age followed? If World War II lasts five years or a decade or more, either in military or economic battles, can our thoroughfares be maintained and civilian movement be continued? It is not within the province of

the historian to be a prophet, and we may well close this chapter with a word of thankfulness that our region in 1942 has a splendid system of wide highways and good roads seldom equaled in a region of its type of character and population.

To the statistically minded we present some heartening figures on United States and Pennsylvania State highways. Again the alphabetical county designation is used; the statistics of the year 1940; and are based on the encyclopedic "Tenth Industrial Directory of the Commonwealth of Pennsylvania," published in 1941.

Cameron County—U. S. Route 120 is the principal highway crossing the county, which has eighty-six miles of improved State highways.

Clarion County—The Lakes to the Sea Highway (U. S. 322) and other important routes traverse the county, which has 388 miles of improved State highways.

Clearfield County—The Lakes to the Sea Highway (U. S. 322), U. S. Route 219 and other important routes traverse the county, which has 613 miles of improved State highways.

Crawford County—The Lakes to the Sea Highway (U. S. 322), the Perry Highway (U. S. 19) and other important routes traverse the county, which has 531 miles of improved State highways.

Elk County—The Buffalo-Pittsburgh Highway (U. S. 219) and other routes traverse the county, which has 187 miles of improved State highways.

Erie County—The Roosevelt Highway (U. S. 6), the Lakes to the Sea Highway (U. S. 322), the Yellowstone Trail (U. S. 20), and the William Flinn Highway (Pa. 8) traverse the county, which has 534 miles of improved State highways.

Forest County—The principal highways crossing the county from north to south are U. S. Route 62, Pa. Route 666, and Pa. Route 68. The county has 139 miles of improved State highways.

Jefferson County—The Lakes to the Sea Highway (U. S. Route 322), the Buffalo-Pittsburgh Highway (U. S. 219), and other important routes traverse the county, which has 447 miles of improved State highways.

McKean County—The Roosevelt Highway (U. S. 6), the Buffalo-Pittsburgh Highway (U. S. 219), and other important routes traverse the county, which has 354 miles of improved State highways.

Mercer County—The Perry Highway (U. S. 19), U. S. Route 62, and other important routes traverse the county, which has 483 miles of improved State highways.

Venango County—The Lakes to the Sea Highway (U. S. 322), the William Flinn Highway (Pa. 8), and other important highways traverse the county, which has 336 miles of improved State highways.

Warren County—The Roosevelt Highway (U. S. 6), U. S. Route 62, and other important highways traverse the county, which has a total of 531 miles of improved State highways.

One other group of figures based on statistics of motor vehicles in 1940 is worthy of consideration. In northwestern Pennsylvania, with a population (1940 census) of about three-quarters of a million people, or one hundred fifty thousand families of the average of five to the family, there were nearly two hundred thousand such vehicles (196,452). Of these 172,243 were passenger cars; 24,209 were commercial trucks and cars. In greater detail the list reads:

<i>County</i>	<i>Passenger</i>	
	<i>Cars</i>	<i>Commercial</i>
Cameron	192	178
Clarion	9,960	1,428
Clearfield	16,856	2,528
Crawford	19,346	2,439
Elk	6,513	892
Erie	44,055	6,156
Forest	192	208
Jefferson	11,493	1,695
McKean	14,558	2,439
Mercer	23,177	2,796
Venango	14,749	2,022
Warren	10,152	1,428

CHAPTER VIII

Courts and Justices

The history of every great court and of every great bar has been attended with constant and violent and political abuse of the legal profession. Yet it is not only fair, but it is essential, to have a clear understanding of the facts to realize that in the great movement for civil liberty the intellectual stimulus and the best expression of principles which have ultimately stirred men to self-sacrifice have generally (although not invariably) come from lawyers. It has been so in the Colonies and Provinces, in each State, and in those smaller divisions of a State, the county.

This is no accident. One explanation is that the recognition of the soundest principles in a community comes about as a result of controversy, and the minds of lawyers are habitually trained to controversy, which is the basis of the profession and its science. And just as the development of that science has progressed as the result of the recorded history of private litigation under our system of reported opinions, which are studied and criticized by the bar, so this controversial training results naturally in concentrating the imagination and critical faculties (both positive and negative) of lawyers upon the study of the recorded history of principles of liberty, more closely and keenly than those of other men. Possibly this accounts for the prominence of the lawyer at every stage of development in our democracy.

It is not a thing that is exclusively to the credit of the bar, although many individual lawyers, some of whom will be described in this story, deserve special credit. The credit belongs to the training necessarily incident to the profession, the main value of which is to serve the public by sharpening the faculties of men for those controversies which are a part of the lot of humanity. It is not to be regarded as a matter of personal or "class" privilege, in spite of all the complacent remarks which find their way into the mouths of

after-dinner speakers of the profession from time to time. These things should be studied and understood and, when they are so studied, the fact which stands out in bold relief is that the prominence of lawyers in a democracy is the result of an absolutely impersonal force which cannot be avoided. That force is the training needed to study and understand and apply such principles as the law. Accordingly, the more the community realizes the essential importance and the useful possibilities of this force of training in the study of principles in this highest development, the more public serv-



County Court House, Erie

ice and value will the State get from the bar, and the more confidence will be shown in allowing competent judges on the bench to give the best service of which they are capable instead of being restricted by petty rules inspired by distrust.

This chapter is an attempt to make a brief story of the development of the courts in the twelve counties of northwestern Pennsylvania, and to weave into that story biographical material concerning the judges who have served these courts. It is not intended in any sense to eulogize the bench or the bar, for members of both are regular human beings, plagued with as many faults as other people.

The practice of the average old-time lawyer was not confined to the county of which he was a resident. When the Fifth Judicial

District comprised Allegheny County and all the country to the north, the Pittsburgh lawyers traveled all over western Pennsylvania, and were as well known in the other county seats of the circuit as in Pittsburgh. As but one judge was provided for several counties, no two counties could hold court at the same time, and to practice law continuously required that the lawyer should follow the court from one county to another.

The judge rode horseback from one seat of justice to another, and many of the attorneys mounted their horses and rode with him. The day upon which the session of the court began was a great one in all the rural shire towns. It was the custom in those days for the sheriff of the county, after the ancient English custom, to collect a group of mounted men and ride out to meet the judge and escort him into the village and to the courthouse. This custom was kept up until the forties, and passed away finally only with railroad building, after which the judges simply came to town like any other passenger on the local train.

The judge and the lawyers usually put up at the principal tavern at the county seat. They were mostly bright and intelligent men, fond of amusement and anecdotes, who had a lively and enjoyable time while the session lasted. The litigants also came to the county town to consult with their attorneys, bringing their witnesses with them. Indeed, the witnesses for an entire week's trials were brought to the court on the first day of the session, for the cases of the whole week were set for trial and any one of them might be called on the first day of the court. In many instances the defendant in a suit employed his attorney only after he appeared at the county seat for trial. Frequently a lawyer, who made an eloquent appeal or by a happy hit won a case over his adversary, was called into other cases, some to be taken up and tried immediately, and of which he had no previous knowledge. Many younger members of the bar, who did not expect to have cases, rode the circuit also with the judge and older lawyers, their object being to learn how to conduct trials and to extend their general acquaintance with legal lights and town folk. This method of travel from one bar to another was abandoned when the business of the several counties had increased so as to warrant a separate judge for each county.

The practice of riding the circuit caused the bar of the county to be more or less transitory. Thus, during the first decade of the century, the Mercer County bar was practically the same, in its individual membership, as the Crawford County bar, or the Venango

County bar, or as any other county that happened to be included in the district.

Into the history of the development of national and State courts we need not go—cannot, in fact, for individual editors have taken as many as five fat volumes to outline this story in Pennsylvania. The year 1761 may be said to mark the beginning of the intellectual history of our modern American doctrine of constitutional law which emerged from the Revolution. The Pennsylvania Constitution of 1776 proved rather unsatisfactory, and accordingly a new Constitution was adopted in 1790. This, incidentally, was about the period that the settlement of northwestern Pennsylvania was slowly getting under way, from which grew the necessity for courts and lawyers within a decade or two. When there are no or very few citizens there is no reason for law and order provisions.

The judiciary provisions of the 1790 Pennsylvania Constitution were as follows:

“The judges of the supreme court, and of the several courts of common pleas, shall hold their offices during good behaviour; But for any reasonable cause, which shall not be sufficient ground for impeachment, the governor may remove any of them, on the address of two-thirds of each branch of the legislature. The judges of the supreme court, and the presidents of the several courts of common pleas shall, at stated times, receive, for their services, an adequate compensation, to be fixed by law; which shall not be diminished during their continuance in office; but they shall receive no fees or perquisites of office, nor hold any other office of profit under this commonwealth.

“The jurisdiction of the supreme court shall extend over the state; and the judges thereof shall, by virtue of their offices, be justices of oyer and terminer and general gaol delivery in the several counties.

“Until it shall be otherwise directed by law, the several courts of common pleas shall be established in the following manner: The governor shall appoint in each county, not fewer than three, nor more than four judges, who, during their continuance in office, shall reside in such county: The state shall be, by law, divided into circuits, none of which shall include more than six, nor fewer than three counties. A president shall be appointed of the courts in each circuit, who,

during his continuance in office, shall reside therein. The president and judges, any two of whom shall be a quorum, shall compose the respective courts of common pleas.

"The judges of the court of common pleas in each county shall by virtue of their offices, be justices of oyer and terminer and general gaol delivery, for the trial of capital and other offenders therein; and two of the said judges, the president being one, shall be a quorum; but they shall not hold a court of oyer and terminer or gaol delivery in any county, when the judges of the supreme court, or any of them, shall be sitting in the same county. The party accused, as well as the commonwealth, may, under such regulations as shall be prescribed by law, remove the indictment and proceedings, or a transcript thereof, into the supreme court.

"The supreme court and the several courts of common pleas, shall, beside the powers heretofore usually exercised by them, have the power of a court of chancery, so far as relates to the perpetuating of testimony, the obtaining of evidences from places not within the state, and the care of the persons and estates of those who are *non compos mentis*; And the legislature shall vest in the said courts such other powers to grant relief in equity, as shall be found necessary; and may, from time to time, enlarge or diminish those powers, or vest them in such other courts, as they shall judge proper for the due administration of justice.

"Judges of the court of common pleas of each county, any two of whom shall be a quorum, shall compose the court of quarter sessions of the peace and orphans' court thereof; and the register of wills, together with the said judges or any two of them, shall compose the register's court of each county.

"The judges of the court of common pleas shall within their respective counties have the like powers with the judges of the supreme court to issue writs of certiorari to the justices of the peace, and to cause their proceedings to be brought before them and the like right and justice to be done.

"The president of the courts in each circuit within such circuit, and the justices of the court of common pleas within their respective counties shall be justices of the peace, so far as relates to criminal matters.

"The governor shall appoint a competent number of justices of the peace, in such convenient districts, in each county,

as are or shall be directed by law: They shall be commissioned during good behaviour; but may be removed on conviction of misbehaviour in office, or of any infamous crime, or on the address of both houses of the legislature.

"A register's office for the probate of wills and granting letters of administration, and an office for the recording of deeds, shall be kept in each county."

The Act of April 13, 1791, provided for the organization of the courts under this Constitution.

By the sixth section it was provided that the Supreme Court should be established with the same powers which had heretofore been established by the laws of the Commonwealth, consistent with the provisions made in the Constitution. Three terms of the court were to be held in each year, one term beginning on the first Monday in January to continue for three weeks and no longer, and two terms not to exceed two weeks each to be held in April and September, respectively, and the courts of *nisi prius* for such intermediate times as the justices of the court should deem most convenient.

The second and third sections stated:

"In order to render effectual the provisions made in the said constitution for establishing the courts of common pleas, this commonwealth shall be, and hereby is, divided into five districts or circuits, to be limited as follows: that is to say, the first circuit to consist of the city and county of Philadelphia, and the counties of Bucks, Montgomery and Delaware; the second circuit to consist of the counties of Chester, Lancaster, York and Dauphin; the third circuit to consist of the counties of Berks, Northampton, Luzerne and Northumberland; the fourth circuit to consist of the counties of Cumberland, Franklin, Bedford, Huntingdon and Mifflin; and the fifth circuit or district to consist of the counties of Westmoreland, Fayette, Washington and Allegheny.

"In and for each of the said districts or counties, a person of knowledge and integrity, skilled in the laws, shall be appointed and commissioned by the governor, to be president and judge of the courts of common pleas, within such district or circuit, and that a number of other proper persons, not fewer than three, nor more than four, shall be appointed and commissioned judges of the courts of common pleas, in and for each and every of the counties of this commonwealth,

which said presidents and judges shall, after the said thirty-first day of August next, respectively, have and execute all and singular the powers, jurisdictions and authorities of judges of the court of common pleas, judges of the courts of oyer and terminer and general gaol delivery, judges of the orphans' courts, and justices of the courts of quarter sessions of the peace, agreeably to the laws and constitutions of this commonwealth."

The Act of March 20, 1799, abolished the courts of *nisi prius* theretofore held by the Supreme Court, sitting in banc in Philadelphia, and established in their place circuit courts, except in the county of Philadelphia, where the *nisi prius* courts were continued. This was done in order to relieve suitors in remote parts of the State from being compelled to come to Philadelphia to attend the trials at *nisi prius*. By the first, second and third sections of this Act it was provided as follows:

"That instead of the courts of *nisi prius*, as now held, a court, styled a circuit court, shall be held after the end of the next December term of the supreme court of this commonwealth by the justices of the same court, or one or the other of them, in the several counties of this commonwealth, except the county of Philadelphia, at such times and places as the said justices shall direct and appoint, having due regard to the convenience of the people, and so as to interfere as little as may be with the courts of common pleas and courts of quarter sessions of the peace in the said several counties.

" From and after the last day of the next December term of the said supreme court, the said justices at the circuit court shall have full power and authority, by virtue of this act, when and often as there shall be occasion, to allow and take cognizance of appeals to the said circuit courts from the register's and orphans' courts in the said several counties, except the county of Philadelphia, and to issue writs of certiorari, habeas corpus, and all other remedial and other writs and process, grantable by the said justices by virtue of their offices, excepting writs of error and certiorari after judgments, orders or decrees given or obtained, and have the same made returnable into the offices of the clerks of the said circuit courts in the said counties, respectively, to which the said writs and process shall be issued as aforesaid; and that each of

the said circuit courts shall have a public seal, and all writs of certiorari, habeas corpus, and all other remedial and other writs and process, from the said several circuit courts shall, in the usual form, be made out and issued by the said clerk of the circuit courts in their respective counties, and sealed with the seal of such court, attested in the name of the chief justice or the judge presiding at and signed by the clerk of the same court."

A Sixth Judicial District, to consist of the counties of Beaver, Butler, Crawford, Mercer, and Erie, was created by an Act of April 2, 1803.

"An Act to alter the judiciary system of this Commonwealth, February 24, 1806, by its section 2 divided the State into two Supreme Court Districts, the Western District consisting of the counties of Bedford, Somerset, Westmoreland, Fayette, Greene, Washington, Allegheny, Beaver, Butler, Mercer, Crawford, Erie, Warren, Venango, Armstrong, Cambria, Indiana, Jefferson, Clearfield, and McKean; and the Eastern District consisting of the remaining counties of the State."

A prothonotary was to be appointed for each district. The eleventh section of the Act abolished the High Court of Errors and Appeals and vested all the powers exercised by that tribunal in the Supreme Court. Section 12 (in part) set up the various districts of which the Sixth District was comprised of Mercer, Butler, Venango, and Erie counties. A Middle District of the Supreme Court was created by the Act of April 10, 1807, in which the counties of Clearfield and McKean were included.

One marked difference between the judicial districts of Pennsylvania and that of its neighbor, for example, is the large number in Pennsylvania and the small number, nine, in New York. One of the several reasons for this is the endeavor by our Commonwealth to serve all its people in legal business with the least expense and difficulty, the reduction of distances to courts and the conservation of time. It is, of course, an old idea, established long before the automobile age, and even prior to the building of railroads. At the present time a judicial district in northwestern Pennsylvania, with two exceptions, is confined to a single county.

William Penn early divided his "Province" into three counties, Philadelphia, Bucks, and Chester. In the grand old style Chester

County vaguely included all the land west, possibly to the Pacific Ocean, and probably northwestern Pennsylvania. By an Act of May 10, 1729, a fourth county was set up, named Lancaster, which seemingly had no determined western limits. By an Act of January 27, 1750, there was erected Cumberland County; an Act of March 9, 1771, established Bradford County from Cumberland. On March 21, 1772 the southeastern part of Bradford was cut off. On February 6, 1773, the county of Westmoreland was erected from Bradford, and it is claimed that the northwestern part of the Common-



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wealth was not affected by this enactment, but it is also asserted that through the proceedings connected with the purchase of much of this territory from the Indians, in 1784, Northwestern Pennsylvania was part and parcel of Westmoreland County. Allegheny County was organized on September 24, 1788, from parts of Westmoreland County, and included the most of northwestern Pennsylvania. By the Act of March 12, 1800, the boundaries of both Crawford and Erie counties were first indicated; Crawford County had its seat of government at Meadville; Erie County, at Erie. For three years, however, official and judicial affairs were transacted at Meadville. It was after this that the twelve counties in western Pennsylvania with which we are concerned were established, and, as already indicated,

judicial districts gradually were set up that now, with the exceptions noted, are chiefly county in extent. As has been brought out in earlier chapters of this history, Erie, Crawford, Mercer, Venango, and Warren counties were erected in 1800; McKean, Jefferson, and Clearfield in 1804; Clarion in 1839; Elk in 1843; Forest in 1848; and Cameron in 1860.

As already indicated, an Act of February 24, 1806, created five new judicial districts in the Commonwealth, of which the Sixth Judicial District comprised the counties of Mercer, Butler, Venango, Crawford, and Erie. On March 23, 1818, Butler County was transferred to the Fifth Judicial District and in its place Warren County was added. Elk County was made a part of this Sixth District, March 16, 1869, but since April 9, 1874, Erie County has been this district. Following almost verbatim, Frank M. Eastman in his "Courts and Lawyers of Pennsylvania," 1922:

Jesse Moore, the first president judge of the Sixth Judicial District, was born in Montgomery County in 1765, and admitted to the bar of Northumberland County in 1796, in which year he began practice at Sunbury. He was commissioned as president judge of the Sixth Judicial District on April 5, 1806, settled at Meadville, and served until his death at that place on December 21, 1824. He is said to have been dignified but courteous, learned but not brilliant, and characterized by sterling integrity and freedom from prejudice. He was short and thick-set, with a benignant countenance. He is thus described in McKnight's "History of Northwestern Pennsylvania":

"He was a heavy, solemn looking man, retaining the costume of the old-style gentleman—small clothes, shoe-buckles, knee-buckles, bald head, but hair long behind and done up in a queue, the head and hair with collar of the black coat covered with a white powder. The writer has since seen the Supreme Court of the United States in session. The black gowns of the judges sitting in a row, the low colloquial tone in which causes are argued and the quietness enforced, certainly gave it a very dignified aspect, but still there was lacking the grand old powdered head and queue that gave Judge Moore the advantage in solemn and imposing dignity."

Judge Moore was succeeded by Henry Shippen, born at Lancaster on December 28, 1788, graduated at Dickinson College in 1808, who read law in the office of Judge Hopkins, of Lancaster, and was admitted to the bar in 1811. He was commissioned president judge

of the Sixth Judicial District on January 24, 1825, and presided over the several courts of that district with ability, until his death at Meadville, in March, 1839. He is said to have been "slow in perception, but of great integrity and candor, and of sound judgment. No judge of that district ever had the confidence and respect of the people in a higher degree. Very few of his cases went to the Supreme Court."

Judge Shippen was followed by Nathaniel Bailey Eldred, who was born in Orange County, New York, on January 12, 1795. He read law at Milford, then the county seat of Wayne County, and was admitted to the bar on January 27, 1817. He was four times a member of the Legislature, and in 1844 a presidential elector for James K. Polk. He was commissioned president judge of the Eighteenth Judicial District in 1835. In 1839 he transferred to the Sixth Judicial District. In 1843 he was appointed president judge of the Twelfth Judicial District and, in 1849, on the erection of the Twenty-second Judicial District, he was commissioned president judge of that district. He was elected to succeed himself in 1851, and resigned to accept the position of naval officer at Philadelphia. He is reputed to have been a man of excellent judgment, but not a profound lawyer.

Next came Judge Gaylord Church, who was appointed president judge of the Sixth Judicial District in 1843, and served until 1851, when the office became elective. He was appointed one of the justices of the Supreme Court in October, 1858. Gaylord Church was born August 11, 1811, in Oswego, New York, coming with his parents to Mercer County, Pennsylvania, in 1816. He attended Mercer Academy, read law with John J. Pearson, of Mercer, and was admitted to the bar in 1834, when he settled in Meadville. He was attorney-general for Crawford County in 1837, member of the Legislature 1840-41; served as above stated in the Sixth Judicial District and the Supreme Court. He died in Meadville in September, 1869. "He was an able lawyer and an efficient and learned judge."

The successor of Judge Church was John Galbraith, born at Huntingdon, Pennsylvania, in 1794. After studying law with William Ayers, of Butler, he was admitted to the bar in 1818. While living at Butler he published a newspaper and afterward went to Franklin, where he remained for many years. Elected to Congress from the Venango and Erie districts, he removed to Erie in 1837. On retiring from Congress, Judge Galbraith practiced law until the fall of 1851, when he was commissioned president judge of the Sixth

Judicial District and served in that capacity until his death on June 15, 1860. "He was a man of great kindness of heart and universal culture."

The vacancy occasioned by the death of John Galbraith was filled for a brief period by Rasselas Brown, who served for but a portion of the year 1860. He was followed by Samuel P. Johnson, who was born in Venango County on January 31, 1809, and was reputed to have been a lineal descendant of Oliver Cromwell. Graduated from Jefferson College, he studied law at Danville, and was admitted to the bar and initiated a practice in Franklin. In 1836 he became a partner of Thomas Struthers, then a leading lawyer in that place. Elected president judge of the Sixth Judicial District in 1861, he presided over the court until 1871, when he declined a reelection and resumed active practice, from which he retired in about 1890. He died on February 3, 1893. The following account of him is taken from the "Twentieth Century Bench and Bar of Pennsylvania":

"Mr. Johnson was above medium height, always spare, smooth of face and strong of feature. His strength was great and endurance phenomenal. Though fond of the country and the forest, vacations had no charm for him. Work was his duty, his pleasure, his pastime. If in any branch of his profession he was preëminent it was as a land lawyer. In the early history of titles, grants, settlement laws, original surveys and kindred subjects, he was authority itself. Though those that knew him best doubted the wisdom of placing on the bench a man of such independence, positive character and convictions, so radical and strong in his prejudices, such distrust was not justified. His administration of justice was characterized with fairness as well as ability, and his record as judge did not suffer when compared with those of eminent men who preceded him. More than two years after his death the Supreme Court, in passing upon some of his work, pronounced him 'one of the most distinguished and honorable lawyers of the Commonwealth.'"

An additional law judge was provided for the Sixth Judicial District by the Act of April 17, 1856, P. L. 395, and David Derickson was elected to that office. He was born in Cumberland (now Perry) County on August 28, 1798, removed to Meadville in 1818, and was graduated from Allegheny College in 1821. He studied law

with George Selden and John B. Wallace, and was admitted to the bar in November, 1823. Shortly after his admission he was appointed deputy attorney-general for the Sixth Judicial District, serving in that capacity for five or six years. In 1824, he was appointed Collector of Internal Revenue for the same district. In 1856 he was elected additional law judge for the Sixth District and after the expiration of his term in 1866, returned to private practice. He retired in 1878 and died on August 13, 1884. The Sixth District lost the additional law judgeship given it by the Act of April 17, 1856, P. L. 395, on the division of the district in 1874.

Judge Johnson was followed by Lansing D. Wetmore, who was born in Pine Grove Township, Warren County, in 1818, the son of Lansing Wetmore, the first prothonotary of that county. Graduated at Union College in 1841, he was admitted to the bar in 1845, and was successful in his profession. In 1870 he was elected president judge of the Sixth Judicial District and served in that capacity until 1874, when the district was divided and he became president judge of the Thirty-seventh Judicial District. He acted in that capacity until January, 1881, retiring to take charge of his extensive business enterprises. He died on December 31, 1905.

Next came John P. Vincent, a member of an old Erie County family, who was born at Waterford, Erie County, on December 2, 1817. Completing his formal education at the Waterford Academy, he read law in the office of Elijah Babbett, of Erie, and was admitted to the bar in 1841. Judge Vincent was a Republican member of the House of Representatives in 1862 and 1863. He was elected additional law judge of the Sixth Judicial District in 1866, succeeding Judge Derickson, and after the adoption of the Constitution of 1874 he was commissioned as president judge and served until the first Monday of January, 1877, after which he returned to the practice of the law at Erie, where he died on March 11, 1909.

William Ayres Galbraith, born at Franklin, Venango County, on May 9, 1823, removed to Erie with his parents in 1837. He was educated at Erie Academy and Allegheny College, Meadville. After reading law with his father he was admitted to practice on May 9, 1844. In the same year he entered the Dane Law School of Harvard University, being graduated in 1845. During the next year he was appointed deputy attorney-general for Erie County, serving until 1850. In 1856 he temporarily abandoned practice on account of ill health and became engaged with others in the construction of the Hoosac Tunnel in Massachusetts, work which he continued for

two years. He resumed practice at Erie in 1858. He was elected president judge of the Sixth Judicial District in 1876, as the people's candidate, and served until January, 1887, before returning to private practice. He died on January 3, 1898.

Frank Gunnison was born on February 2, 1848, at Erie, where his father, Jonas Gunnison, was a prominent attorney of that city. Judge Gunnison was educated in Erie Academy and University of Michigan. He studied law with his father before matriculating at the Harvard Law School, where he graduated in 1870. Admitted to the bar on February fifth of that year, he began to practice with General D. B. McCreary, with whom he continued to be associated until 1875. He was elected president judge of the Sixth Judicial District in November, 1886, and served until January, 1897, when he returned to practice, in which he is now engaged as the senior member of the firm of Gunnison, Fish, Gifford and Chapin.

Judge Gunnison was followed by Emory A. Walling, who was elected in November, 1896, and reëlected in 1906. He served until January 23, 1915, when he was appointed a justice of the Supreme Court of Pennsylvania, succeeding John P. Elkin, deceased. With this tribunal he compiled a noteworthy record to his death in 1932. A farm boy, Justice Walling was born June 11, 1854, in Erie County. He was educated in the public schools, the Edinboro State Normal College and the Lake Shore Seminary at North East, Erie County. He was district attorney and State Senator for one term each. Admitted to the bar he built up a large practice in northwestern Pennsylvania and his election and reëlection as president judge of the Sixth Judicial District was a richly deserved honor, as was his appointment as associate justice of the Supreme Court.

An additional law judge for the Sixth Judicial District was provided for by the Act of March 24, 1911, P. L. 25, and under the provisions of this Act Paul A. Benson was appointed and afterward elected as such additional law judge.

He was born at Petroleum Center, Venango County, Pennsylvania, August 25 1865, a son of Hugh Hamilton and Lydia Dedelia (Doyle) Benson, and grandson of James and Rebecca (Van Kirk) Benson, who were pioneers in the township of Waterford, Erie County. Judge Benson was reared from childhood in Waterford Township; attended its public schools, Waterford Academy, and had three years at Allegheny College. He read law under his uncle, William Benson, 1890-91, and completed his professional studies in the office of Clark Olds, Esq., being admitted to the bar on April

3, 1893. Judge Benson was elected district attorney of Erie County on November 3, 1896, and at the end of his term in office continued a general practice of the law. "Although he was on the bench but a little more than four years, he filled the office ably, conscientiously and successfully." He died at his home in Erie July 21, 1915.

Upon the resignation of Judge Walling, in December, 1915, he was succeeded as president judge by Uriah Pennypacker Rossiter, a native of Norristown, born October 6, 1862. In 1870 the family settled in Girard Township, Erie County, where he attended the district schools and Girard Academy, finishing his formal education at Swarthmore College. After studying law with J. Ross Thompson, of Erie, he was admitted to the bar on June 28, 1887. He served one term as district attorney from 1893; was elected additional law judge of the Sixth Judicial District on November 2, 1915, and on the death of Judge Benson was appointed to fill his unexpired term. After the resignation of Judge Walling in December of that year he became president judge.

Judge Rossiter was followed as additional law judge by Edward Lyman Whittelsey, born at Bethlehem, Litchfield County, Connecticut, on October 5, 1841. About the year 1850, his father's family settled at Waterford, Erie County, where he attended the public schools and the Waterford Academy until the outbreak of the Civil War. On July 29, 1861, he enlisted in Company E, 83d Regiment, Pennsylvania Volunteers, and served with it until July 29, 1865, at which time he was captain of Company A. He was wounded in action in the second battle of Bull Run and in the battle of the Wilderness. Judge Whittelsey was appointed deputy prothonotary of the Court of Common Pleas of Erie County in December, 1866, and was elected prothonotary in 1869, and reelected in 1872. Admitted to the bar of Erie County in May, 1877, he was at various times attorney for the sheriff, register and recorder, prothonotary and clerk of the courts of Erie County; solicitor for the school board of the city of Erie, and the board of trustees of the Pennsylvania Soldiers' and Sailors' Home. He was appointed additional law judge of the Sixth Judicial District on January 3, 1916, succeeding Judge Benson, deceased; elected to succeed himself in 1917, and died January 28, 1920. He was succeeded by William E. Hirt, appointed to serve until the first Monday of January, 1922.

A separate Orphans' Court for Erie County was constituted by the Act of May 24, 1921, and Henry A. Clark was appointed judge of said court. Judge Clark was born in Harbour Creek, Erie County,

Pennsylvania, on January 7, 1850. He was educated in the public schools of Erie County, the Erie Central High School, Harvard University and the Harvard Law School. Admitted to practice in Massachusetts, he subsequently became associated with the Edison Electric Light Company interests of New York. Returning to Erie, he was admitted to the practice of the law, and formed a partnership with his father-in-law, General David B. McCreary. At one time he owned and published the "Erie Gazette." He was elected a common councilman and solicitor for the city of Erie twice; became



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a member of the State Senate in November, 1910, to succeed A. E. Sisson, and was reelected in November, 1912. He afterwards represented the Erie-Crawford District in Congress during World War I.

The present 1942 judge of the Orphans' Court of Erie is J. Orin Waite, a native of Le Boeuf Township, Erie County, who, after attending public schools, Waterford Academy, was graduated from the Edinboro State Normal College in 1894; from Allegheny College in 1898, and admitted to the Erie County bar in 1902, and to the Supreme and Superior courts of Pennsylvania, and the United States Supreme Court. Judge Waite served as district attorney of Erie County (1912-16), and has been judge of the Orphans' Court

of Erie County since January 1, 1932. He was reelected in November, 1941, for a term that ends in 1952.

The Thirtieth Judicial District was established by the Act of February 24, 1870, P. L. 33, and consists of the county of Crawford, which had previously belonged to the Sixth Judicial District.

The first president judge of the Thirtieth Judicial District was Walter H. Lowrie, who had previously been Chief Justice of the Supreme Court of Pennsylvania. His term as Chief Justice of the Supreme Court terminated in December, 1863, but on the erection of the Thirtieth Judicial District, he was elected president judge of that district and served in that capacity until his death in Meadville in November, 1876. Judge Lowrie was born in Allegheny County, March 31, 1807, and was admitted to the bar at Pittsburgh on August 4, 1829. He was appointed judge of the District Court of Allegheny County in August, 1846, to succeed Robert Cooper Grier, who had been elevated to the Supreme Court of the United States as an Associate Justice on August 4, 1846, the third in the history of that court to be named from Pennsylvania. Walter H. Lowrie was elected a judge of the Supreme Court of Pennsylvania in October, 1851, drew a term of twelve years, and on December 7, 1857, became chief justice by rotation, acting in that capacity until December, 1863. His service as president judge of the new district, consisting of Crawford County, created in 1870, has been indicated. At the time of his demise he was in his seventieth year.

The second judge was S. Newton Pettis, native of Lenox, Ohio, born October 10, 1827. From 1842 to 1845 he taught county schools, and began the study of the law in 1846. In 1848 he came to Meadville, where he was admitted to the bar on November 14, 1848. In 1856 he entered into partnership with James Thompson, afterwards Chief Justice of the Supreme Court. In 1861 he was appointed one of the judges of the court for the Territory of Colorado, from which office he resigned in 1863, and returned to Meadville. In 1869 he was elected to Congress, and on the death of Judge Lowrie he was appointed to fill the vacancy until the next election. After his retirement from the bench in December, 1877, he was appointed United States Minister to Bolivia, in which office he served for several years, afterwards returning to Meadville and later removing to Washington, District of Columbia, where he practiced before the Court of Claims. He died in December, 1900.

The third district judge was Pearson Church, son of Gaylord Church (*q. v.*), an Associate Judge of the Supreme Court. He

was graduated at Allegheny College in 1858, and was admitted to the bar of Crawford County in February, 1858. He was a member of the Constitutional Convention of 1873, and took an active part in the deliberations of that body. Elected president judge of the Thirtieth Judicial District in the fall of 1877, he served with ability until January, 1888. He died at Meadville on June 13, 1898.

The fourth judge of the Thirtieth Judicial District was John J. Henderson, an office to which he was elected in the fall of 1887, and served until January, 1898. Judge Henderson was born on September 23, 1843, in Allegheny County, and was educated in the Meadville Academy and Allegheny College. After receiving his honorable discharge from long service during the Civil War, June, 1865, he studied law with his brother Henry Henderson, being admitted to the bar August 27, 1867. After three years as district attorney from 1872, he continued a large law practice with the exception of from 1887 to 1898, when he was president judge. He was appointed a judge of the Superior Court of Pennsylvania in March, 1903, and was elected to this office in 1913.

Frank J. Thomas was the successor to Judge Henderson. He was born on October 13, 1859, in Woodcock Township, Crawford County. Graduated from Allegheny College in 1885, he read law with John J. Henderson, and was admitted to the bar in May, 1889. Later he was principal of the Classical School at Tuscola, Illinois. In the fall of 1897 he was elected president judge of the Thirtieth Judicial District, and served until January, 1908, when he was succeeded by Thomas J. Prather.

Thomas J. Prather was born in Troy Township, Crawford County, Pennsylvania, the son of John M. and Sarah (Strawbridge) Prather. His early life was spent on a farm and in a sawmill. He attended normal school at Edinboro, and also Allegheny College. He was admitted to the practice of the law in Crawford County on June 2, 1896, where he was actively engaged in the general practice of the law until 1907, when he was elected judge of the Thirtieth Judicial District and in 1917 was reelected to this bench.

The Thirty-fifth Judicial District was established by an Act of April 9, 1874, and consists of the county of Mercer, which had formerly belonged to the Twenty-eighth Judicial District.

The first president judge of the Thirty-fifth Judicial District was Arcus McDermitt, who was born in Findley Township, Mercer County. He was educated in Mercer Academy and Columbia Col-

lege, Tennessee, in which latter State he taught school for a few years. Returning to Butler County, he read law with Charles Sullivan, of Butler, and was admitted to the bar of Butler County in 1849 and to the bar of Mercer County in 1851. He was elected county treasurer of Mercer County in 1852. On the establishment of the Thirty-fifth Judicial District in 1874, he was elected president judge of that district and served from January, 1875, until his death on November 30, 1883. He was a prominent candidate for judge of the Supreme Court before the Democratic Convention of 1882.

The second president judge of the Thirty-fifth Judicial District was Samuel S. Mehard, born in Butler County, who early removed with his parents to Mercer County. He graduated with high honors from Westminster College, and studied law under the direction of Judge Trunkey at Mercer. After his admission to practice he spent two years in the study of languages at Heidelberg, Germany. On his return he became a partner with James A. Stranahan, then of the Mercer County, but later of the Dauphin County bar, a partnership that was continued to the death of Judge McDermitt in 1883, when he was appointed president judge of the Thirty-fifth Judicial District and was elected to succeed himself at the general election of 1884, and served until January, 1895, when he resumed the practice of his profession at Pittsburgh, where for a number of years he was one of the lecturers in the Law Department of the Western University of Pennsylvania.

The third president judge was Samuel H. Miller, a native of Mercer County, who was educated in the district schools and Westminster College. For a number of years after leaving college he conducted the "Mercer Dispatch," a weekly newspaper, studying law at the same time, and was admitted to the bar in 1871. He was a member of the Forty-seventh and Forty-eighth Congresses, and in 1894 was elected president judge of the Thirty-fifth Judicial District, serving until January, 1905. He long was prominent in politics and connected with many public and charitable institutions.

Alfred W. Williams, successor to Judge Miller, was born at Brookfield, Ohio, December 22, 1851, of New England ancestry. Obligated to leave school at an early age, he was employed in one of the rolling mills at Sharon and afterwards worked as a carpenter and builder from 1870 to 1881. He then obtained a clerkship in the General Assembly at Harrisburg, and later was employed in the office of the supervising architect of the Treasury Department at Washington, District of Columbia, where he became a student at

the Law School of the Columbian University, from which he was graduated in 1883. Alfred W. Williams was admitted to the Supreme Court of the District of Columbia in 1884. He then returned to Sharon and was admitted to the Mercer County bar on June tenth of that same year, practicing at Sharon until his election as president judge of the Thirty-fifth Judicial District in November, 1904, and served from January, 1905, until January, 1915, when he retired to practice his profession. He was succeeded on the bench by James A. McLaughry, who was elected in November, 1914.

The Thirty-seventh Judicial District was established by an Act of April 9, 1874, P. L. 54, and then consisted of the counties of Warren, Forest, and Elk. Warren County was taken from the Sixth Judicial District, and Forest and Elk counties from the Eighteenth Judicial District. By the Act of August 7, 1883, P. L. 323, the district was made to consist of the counties of Warren and Forest—Elk County being transferred to the Twenty-fifth Judicial District.

The first president judge of the Thirty-seventh Judicial District was Lansing D. Wetmore, who was elected president judge of the Sixth Judicial District in 1870, and was transferred to the Thirty-seventh Judicial District on the establishment of that district. He is mentioned in connection with the Sixth Judicial District.

The second president judge was William D. Brown, who was born at Sugar Grove, Warren County, September 6, 1823. He was graduated from the Warren Academy in 1841, and was admitted to the bar in December, 1847. He was the first elected district attorney for Warren County, and served as a member of the Legislature in the years 1863-65. He was elected president judge of the Thirty-seventh Judicial District in 1880, and served until January, 1891.

The third president judge, Charles N. Noyes, was born at Marshall, Michigan, July 26, 1849. He was a druggist and printer before taking up the study of law. Admitted to the bar of Warren County in 1877, he was elected president judge of the Thirty-seventh Judicial District in 1890, acting until his death on February 24, 1898. He was an unsuccessful candidate for election to the bench of the Superior Court in 1895.

The fourth president judge was William M. Lindsey, born in Pine Grove Township, Warren County, June 8, 1841. His formal education was obtained at "The Academy," Randolph, New York, and in the State Normal School at Edinboro. In the summer of 1862 he enlisted in Company F, 145th Pennsylvania Volunteers, but was discharged on account of illness in the summer of 1863. He was

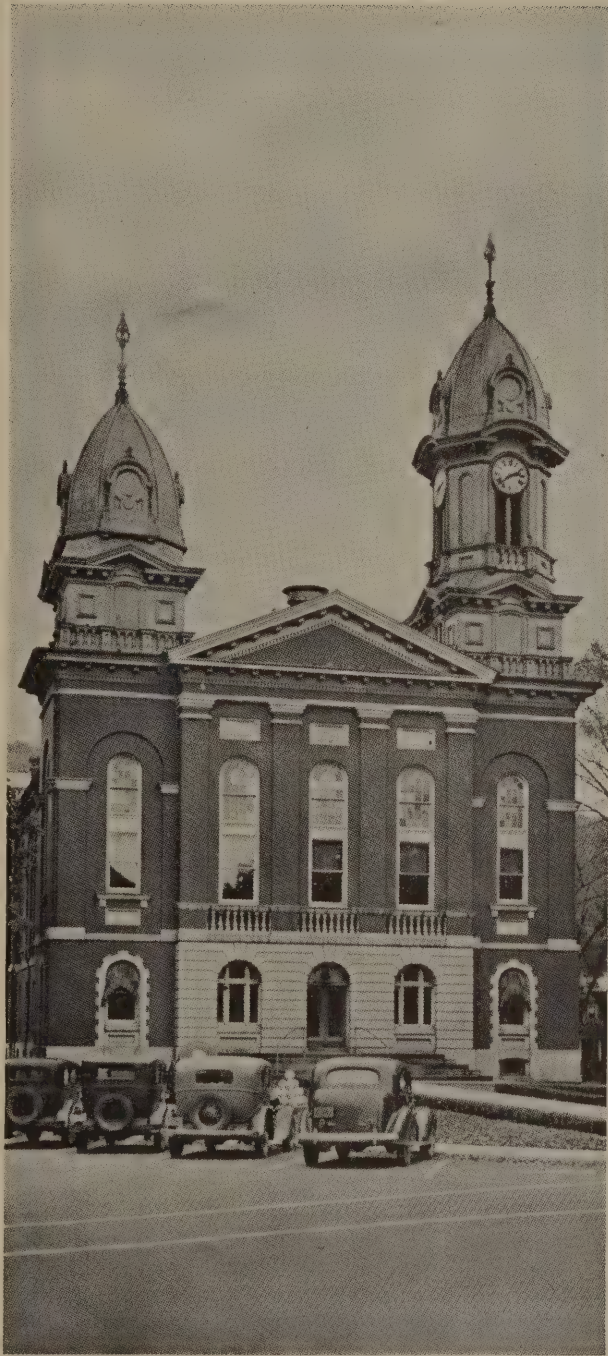
superintendent of the public schools of Warren County from 1865 to 1871, and was admitted to the bar on March 1, 1872. Judge Lindsey was a member of the General Assembly from 1877 to 1878. He was appointed president judge of the Thirty-seventh Judicial District to fill the vacancy left by the death of Judge Noyes on March 2, 1898, and elected to succeed himself in the fall of that year, serving until January, 1909. Judge Lindsey was prominent in the business life of his county. He died on May 5, 1915.

The fifth president judge of the Thirty-seventh Judicial District was William E. Rice, a native of Lottsville, Warren County, Pennsylvania, born December 19, 1860. He was educated at the Chamberlain Institute at Randolph, New York, and Allegheny College at Meadville, Pennsylvania, and studied law under Charles N. Noyes and Watson D. Hinckley, being admitted to the bar on April 6, 1885. He was elected judge of the Thirty-seventh Judicial District in 1908, succeeding William M. Lindsey, serving from January 1, 1909, to June 29, 1910, when he resigned to take effect July 1, 1910, and returned to the practice of law.

The sixth president judge was Watson D. Hinckley born March 17, 1854, at Fredonia, Chautauqua County, New York. Graduated from Fredonia (New York) State Normal School in 1874, he entered the Literary Department of the University of Michigan, where in 1878 he received the degree of Bachelor of Philosophy. Admitted to the bar in 1880 he was president judge of the Thirty-seventh Judicial District, by appointment of Governor Edwin S. Stuart, from July 21, 1910, until the first Monday in January, 1912, and elected for the full term of ten years in January, 1912. His death in 1920 was deeply regretted by colleagues on the bench and at the bar.

The seventh president judge of the Thirty-seventh Judicial District, Edward Lindsey, was born at Warren, Pennsylvania, December 17, 1872. He was educated at the Phillips-Exeter Academy and Dartmouth College, from which he was graduated in 1891. Three years later he was graduated from the New York Law School, and began a practice of the law at Warren in 1895, as a member of the law firm of Lindsey and McDonald. He was a member of the Pennsylvania House of Representatives during the session of 1915. He was appointed president judge of the Thirty-seventh Judicial District on July 14, 1920, succeeding Watson D. Hinckley.

The Forty-sixth Judicial District was established by the Judicial Apportionment Act of August 7, 1883, P. L. 323, and consists of



Venango County Court House, Franklin

the county of Clearfield, which had formerly belonged to the Twenty-fifth Judicial District.

By the seventh section of said Act of August 7, 1883, P. L. 323, it was provided that the Forty-sixth and Forty-seventh Judicial districts judges should be elected at the November election in 1883, and that the judges then in commission for said counties should continue to exercise their jurisdiction therein until the first day of January, 1884. Under this provision, Judge Mayer of the twenty-fifth Judicial District sat in the Forty-sixth Judicial District until January, 1884, when he was succeeded by David Luther Krebs, who was born on October 5, 1846, in Penns Valley, Centre County, and was educated at the academy in Pine Grove, Centre County, and at Milton Academy, Pennsylvania. He taught a country school near Clearfield in 1864, but left his school to enlist in the 98th Regiment, Pennsylvania Volunteers, with which he served until honorably discharged in 1865. He then spent a year in Venango County, afterwards teaching a school in Montour County. He went to Bellefonte in 1867, read law with Adam Hoy, and was admitted to the bar on April 30, 1869. In 1873 he entered into partnership with his father-in-law, Senator William A. Wallace, remaining until his election to the bench in the fall of 1883. He served from January, 1884, to January, 1894, retiring to engage in a law practice that spread to many parts of the State. He was a candidate for justice of the Supreme Court before the Democratic Convention of 1899. Judge Krebs died on January 25, 1911.

Cyrus Gordon, successor of Judge Krebs, born at Hecla Furnace, Centre County, was graduated from Pennsylvania State College in 1866. While studying law in the office of Judge Linn, at Bellefonte, he also pursued law courses at the Michigan University in 1867 and 1868. He was admitted to the bar of Centre County in 1869, and a year later to the bar of Clearfield County. At Clearfield he became a partner of Thomas H. Murray, under the firm name of Murray and Gordon. He was president judge of the Forty-sixth Judicial District from January 1, 1894, to January 1, 1904, retiring to private practice in partnership with Harry Boulton. Judge Gordon died March 10, 1911.

He was followed on the bench by Allison Opp Smith, born in Limestone Township, Mercer County, October 23, 1857. After attending the common schools and the Bloomsburg State Normal School, he entered State College, near Bellefonte, from which he was graduated in the class of 1877. He read law with Oscar Foust,

at Watsontown, Northumberland County; matriculating at the Law Department of the University of Pennsylvania, from which he was graduated in June, 1882. He located in Clearfield County in September of that year, and was admitted to the bar in January, 1883. In 1894 he formed a partnership with T. H. Murray, under the firm name of Murray and Smith. He was elected president judge of the Forty-sixth Judicial District in the fall of 1903 and served from January, 1904, to January, 1914, when he returned to practice at the bar.

Singleton Bell, who succeeded Judge Smith, was born about 1862, and was educated at the University of Michigan. After studying law with Wallace and Krebs, he was admitted to the bar on January 29, 1884. He served as district attorney of Clearfield County for three years. He was elected president judge of the Forty-sixth Judicial District in November, 1913, taking his seat in January, 1914.

The Forty-eighth Judicial District was established by the Act of August 7, 1883, P. L. (1885) 323, and then consisted of the county of McKean, to which the county of Potter was attached, both of which counties had been taken from the Fourth Judicial District. By the Act of July 18, 1901, P. L. 669, the district was made to consist of McKean County alone, Potter County being made the Fifty-fifth Judicial District.

The first president judge of the Forty-eighth Judicial District was Arthur G. Olmsted, who had been elected additional law judge of the Fourth Judicial District in 1882, and was transferred therefrom on the establishment of the Forty-eighth Judicial District. He was born September 3, 1827, at Masonville, Delaware County, New York, and moved to Ulysses, Potter County, in 1836. He studied law with John S. Mann and was admitted to the Potter County bar on January 12, 1850, and was made district attorney in that same year. In 1862 he was elected a member of the General Assembly; served three terms and was Speaker during his last term. Judge Olmsted entered the State Senate in 1868 and in 1871 was appointed additional law judge of the Seventh Judicial District. He was the unsuccessful Republican candidate for Lieutenant-Governor in 1874. Elected additional law judge of the Fourth Judicial District in 1882, upon the division of that district in 1883, he became president of the Forty-eighth Judicial District, and was reëlected in 1892. On the division of the Forty-eighth Judicial District and the establishment of the Fifty-fifth Judicial District in 1901, Judge Olmsted became president judge of the latter district and continued on the bench until January, 1903.

He was followed by Thomas A. Morrison, who was elected additional law judge of the Forty-eighth Judicial District in September, 1887, under the provisions of the Act of June 15, 1887, P. L. 407. Reëlected in 1897, he became president judge on the transfer of Judge Olmsted to the president judgeship of the Fifty-fifth Judicial District in 1901, serving in that capacity until January, 1902. Upon the resignation of Judge Mitchell from the Superior Court he was appointed to succeed him on December 30, 1902, and served in that capacity until January, 1914.

Thomas A. Morrison was born at Pleasantville, Venango County, May 4, 1840, and received his academic education at the Edinboro State Normal College and a school at Poughkeepsie, New York. A veteran of the Civil War—July, 1862, to April, 1863—he served with the 121st Pennsylvania Volunteers and lost his left arm and was otherwise wounded in the battle of Fredericksburg. Judge Morrison was treasurer of Venango County (1868-69), admitted to the bar at Pleasantville, he practiced his profession there to 1879, when he removed to Smethport. His connection with the district courts and the Superior Court have been mentioned.

Joseph W. Bouton was elected additional law judge of the Forty-eighth Judicial District in 1901, becoming president judge after the retirement of Judge Morrison in January, 1902, and at the expiration of his first term was reëlected.

The Fifty-fourth Judicial District was established by an Act of June 12, 1895, P. L. 190, and consists of the county of Jefferson, which was taken from the Eighteenth Judicial District.

The first president judge of the Fifty-fourth Judicial District was John W. Reed, of Brookville, who studied law in the office of James Campbell, of Clarion, and was admitted to the bar in Clarion County on August 23, 1875. He began practice at Brookville in partnership with A. C. White, under the firm name of White and Reed, but returned to Clarion in 1877, and became a partner in the firm of Wilson, Jenks and Reed. Later he was at Grand Forks, North Dakota, but came again to Clarion in 1884, where he followed his profession until his appointment to the bench. On the creation of the Fifty-fourth Judicial District in 1895 he was appointed president judge thereof, and in the fall of that year he was elected to succeed himself, and reëlected in 1905, serving until January, 1916. Judge Reed was succeeded by Charles Corbett.

The judges whose biographies have been sketched in the foregoing have in the main passed to their reward, and those still living

have transferred their activities to other than the Court of Common Pleas. They comprise a remarkably fine group of men who brought to and applied the laws in northwestern Pennsylvania, and are worthy of more than the brief memorials allotted to them in this chapter.

The latest apportionment of the Commonwealth into judicial districts is The General Act of the Assembly, No. 106, approved May 21, 1931. Quoting only sections applicable to northwestern Pennsylvania, these read:

“SECTION 1. Be it enacted, &c., That the judicial districts of the Commonwealth shall be numbered, composed, designated, and shall each have the number of judges, respectively, as follows:

“The sixth district, of the county of Erie, and shall have two judges learned in the law in the common pleas, and one judge learned in the law in the orphans’ court.

“The eighteenth district, of the county of Clarion, and shall have one judge learned in the law.

“The twenty-fifth district, of the counties of Cameron, Clinton, and Elk, and shall have one judge learned in the law.

“The twenty-eighth district, of the county of Venango, and shall have one judge learned in the law.

“The thirtieth district, of the county of Crawford, and shall have one judge learned in the law.

“The thirty-fifth district, of the county of Mercer, and shall have one judge learned in the law.

“The thirty-seventh district, of the county of Warren, and shall have one judge learned in the law. The county of Forest shall be attached to this district.

“The forty-sixth district, of the county of Clearfield, and shall have one judge learned in the law.

“The forty-eighth district, of the county of McKean, and shall have one judge learned in the law.

“The fifty-fourth district, of the county of Jefferson, and shall have one judge learned in the law.

“SECTION 2. The nomination of judges which the qualified electors of any county are entitled to elect of themselves, unconnected with any other county or district, shall be made, held, and conducted, and the returns of votes cast at primary elections for the nominations of such judges, shall be made, computed, canvassed, and certified, as now or may be hereafter provided by law.

"SECTION 9. In all judicial districts, at the municipal election next preceding the expiration of the term of any judge now or hereafter commissioned, the qualified electors of any county or counties composing such district shall elect a successor to such judge to serve as provided by law.

"SECTION 10. In all districts in which, by the provisions of this act, two or more judges are provided, one of said judges shall be the president judge of said district, and the other or others shall be the additional law judge or judges thereof. The judge of said districts whose commission shall first expire shall be the president judge thereof, except when the president judge has been or shall be reelected, in which case he shall continue to be president judge. The said additional law judge or judges shall possess the same qualifications which are required by the Constitution and laws for the president judge of said district, and shall hold his or their office for a like term and by the same tenure, and shall have the same powers, authority, and jurisdiction, and shall be subject to the same duties, restrictions, and penalties, as the president judge of said district.

"SECTION 11. In all cases where, by the provisions of this act, a district heretofore consisting of more than one county is divided into two or more districts, and in all cases in which another, the judge now in office shall continue to serve until the expiration of his term of office, as judge of the district which, by this act, is given the same number as that of the district in which the said judge has heretofore served. At the municipal election next preceding the expiration of the term of office of any such judge, the electors of the county or counties comprising such district shall elect a judge to serve as provided by law.

"SECTION 12. In all districts in which the office of president judge, additional law judge or the office of orphans' court judge is created by the provisions of this act, the Governor shall appoint a person, learned in the law and otherwise legally qualified, and commission him as president judge, additional law judge or orphans' court judge of such district, as the case may be, to serve until the first Monday of January, one thousand nine hundred and thirty-two. At the municipal election to be held in the year one thousand nine hundred and thirty-one, successors to the judges so appointed shall be

elected by the proper counties for terms of ten years, and shall take office on the first Monday of January, one thousand nine hundred and thirty-two. Where any office of judge has been created at the session of the General Assembly of one thousand nine hundred and thirty-one, otherwise, than by this act, such office shall be in addition to those provided for by this act.

"SECTION 13. . . . All other acts and parts of acts inconsistent with the provisions of this act are hereby repealed.

"SECTION 14. This act shall be in force immediately upon its passage and approved by the Governor."

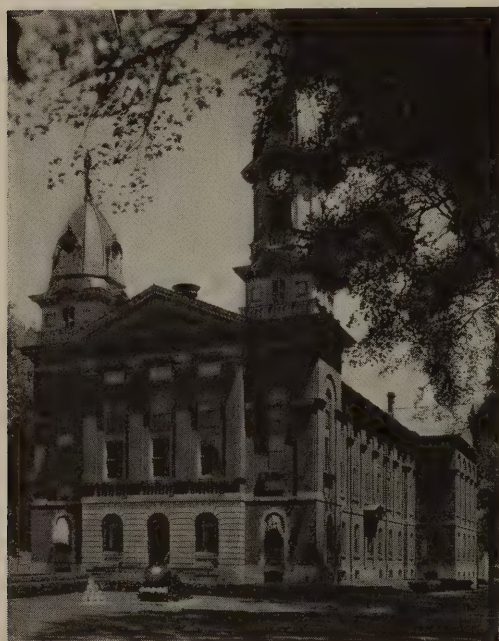
The following biographical sketches are reprinted from "The Pennsylvania Manual," Vol. LXXXV, year 1941, Brown Focht, editor. The format used is: Name of the common pleas judge; county; place of residence; number of district and the first year of his incumbency and the year his present term on this bench ends.

Judge Miles B. Kitts, Erie County, Erie city, Sixth Judicial District (1935-46), was born in Summit Township, Erie County, April 24, 1880; educated in the common schools of Summit Township; attended the historical Waterford Academy; was graduated from Edinboro State Normal School in 1902 and was a postgraduate in the class of 1903; taught school in Erie County and in the city night schools for several years; resigned as principal of Glenwood High School to take up the practice of law; admitted to the bar of Erie County on October 28, 1907; also admitted to practice before the State Superior and Supreme courts and all United States courts; was actively engaged in the practice of law; served in the 1913 and 1915 sessions of the General Assembly as a member from the Second Legislative District; elected mayor of Erie, February 29, 1916, at a special election, serving throughout the period of the World War; reëlected in 1919 and retired in January, 1924; elected Senator to fill the unexpired term of the late Marvin E. Griswold at a special election on February 1, 1927; reëlected in 1928; elected judge in 1935; succeeded Judge Hirt as president judge in March, 1939.

Elmer L. Evans, Erie County, Erie city, Sixth Judicial District (1939-50), was born in Kane on April 22, 1892, the son of Alfred and Emma Welker Evans; received his education at the Kane High School and Dickinson Law School, earning degree of Bachelor of Laws; member of Delta Chi fraternity; active in 'varsity baseball;

an attorney, practicing in Erie County courts, Appellate courts and Federal courts; treasurer of Republican party, 1937-39; member of hospital board and active in community chest and other civic affairs; was second lieutenant of infantry in World War, 1917-19; first lieutenant air service and instructor of Aerial Gunnery; captain of machine gun company, Officers' Reserve Corps; member of American Legion, Masons, Elks; married to Martha Jobson; two children.

Harry M. Rimer, Clarion County, Clarion city, Eighteenth Judicial District (1932-44), was born in Clarion County, Pennsylvania,



(Holmes Crosby, Architect for Additions of 1932)

Venango County Court House

son of David A. and Mary Greer (Patton) Rimer; educated in local schools, Franklin and Marshall and Washington and Jefferson colleges; member of Delta Tau Delta fraternity; practiced law in the courts of Clarion and adjoining counties, in the Superior and Supreme courts and the United States Federal courts; president of local school board from 1908 to 1924; trustee Clarion State Normal School, later State Teachers College, 1906 to 1935; chairman board of trustees, 1939 to 1942; member executive committee Pennsylvania Bar Association and member of American Bar Association and

Pennsylvania Council of Juvenile Court Judges and Juvenile Court Judges of America; legal advisor of Selective Draft Board during World War I. Judge Rimer married Bertha Caldwell Collner, of St. Petersburg, Clarion County. They have three children: Mrs. W. Wallace Smith, of Clearfield; Harrison C. and Edward M., of Clarion.

Henry Hipple, Cameron, Clinton and Elk counties, Lock Haven, Clinton County, Twenty-fifth Judicial District (1938-50), was born in Lock Haven on April 5, 1879, the son of Torrence C. and Belle

W. (Allen) Hipple; received his education at Chambersburg Academy and Princeton University; was graduated from Princeton in 1900 with degree of Bachelor of Arts; was a practicing lawyer in the courts of Clinton County, Supreme and Superior courts of Pennsylvania and United States District Court (Middle District of Pennsylvania); studied law in the office of father, Torrence C. Hipple, in Lock Haven, and was admitted to the bar in September, 1902; appointed president judge on January 16, 1939; elected, November, 1939, for a term of ten years; served as district attorney of Clinton County, 1905-06, and county solicitor from 1909 to 1912; four-minute speaker during World War I; chairman of Red Cross drives; married to the former Miriam L. Mosser; three children.

Lee A. McCracken, Venango County, Oil City, Twenty-eighth Judicial District (1932-44), was born in Cornplanter Township, Venango County, May 3, 1880; attended the local public schools; was graduated from Rouseville High School and Oil City High School; taught school in the local township; attended the Literary and Law Departments of the University of Michigan; read law in the office of Honorable P. M. Speer; admitted to the bar in 1909; served as district attorney of Venango County from 1914 to 1926; was appointed president judge by Governor Gifford Pinchot in 1932 to fill the vacancy caused by the elevation of Honorable William M. Parker to the Superior Court; elected for a full term in 1933.

O. Clare Kent, Crawford County, Meadville, Thirtieth Judicial District (1927-48), was born in Espyville, Crawford County, June 15, 1876; attended school of North Shenango Township, Linesville High School and Allegheny College, graduating therefrom in 1896; read law with Hon. Joshua Douglas; admitted to the bar, May 30, 1900; also admitted to practice in Appellate courts of Pennsylvania and United States courts; attorney-at-law since admission to the bar, member of influential clubs of his county; elected judge in 1927, for a term of ten years, and reelected in 1937.

George H. Rowley, Mercer County, Mercer, Thirty-fifth Judicial District (1937-48), was born on November 25, 1882, the son of George and Margaret (McGuirl) Rowley; attended Greenville High School, Thiel College, Allegheny College, Yale College and Yale Law School; attained degree of Bachelor of Arts at Allegheny College, 1905, Bachelor of Arts at Yale in 1906, and Bachelor of Laws at Yale Law School, 1908; Doctor of Laws, Thiel College, 1938; member Alpha Chi Rho fraternity; president of Allegheny College Alumni Association of Mercer County; member of Mercer

County Bar and has practiced before Superior and Supreme courts of Pennsylvania; district attorney of Mercer County, 1912 to 1919; Collector of Customs, Pittsburgh, 1919-23; has served as Democratic county chairman, State Committeeman, Mercer County; was a candidate for House of Representatives in 1909; candidate for Secretary of Internal Affairs; county chairman Emergency Relief; chairman legal advisory board during World War; chairman Thiel College campaign for endowment; acting president Thiel College, 1941; trustee of Greenville Hospital; member Public Charities Association; president Greenville Playgrounds; member Pennsylvania State Bar Association; Judge Rowley is married to the former Susan Templeton; they have two children and reside in Greenville.

Allison D. Wade, Warren and Forest counties, Warren, Warren County, Thirty-seventh Judicial District (1941-52), was born on September 17, 1902, the son of Harrison Douglas and Alice (Jones) Wade; he attended Warren High School, Pennsylvania State College, the University of Southern California, University of Virginia, Harvard University, and the University of Buffalo; in college he was active in literary and art work and played lacrosse; holds degrees of Bachelor of Arts and Bachelor of Arts in Commerce; an attorney-at-law, he is a member of the Warren County bar, State Supreme and Superior courts, and the Federal Court; appointed solicitor of Warren County, two terms; local Young Republican chairman; Young Republican National Committeeman from Pennsylvania for two terms; Reserve Officers' Training Corps, Penn State; contributor to "Medico-Legal Lights" and American Medical Association "Journal"; is married to the former Ruth Tillotson; elected judge of the Thirty-seventh Judicial District, November 4, 1941.

W. Wallace Smith, Clearfield County, Clearfield, Forty-sixth Judicial District (1933-44), was born in Clearfield, June 5, 1890; attended public schools and was graduated from Princeton University in 1911; taught in high schools 1912-15; was graduated from University of Pennsylvania Law School in 1917; admitted to bar, 1917, and practiced continuously at Clearfield until elected judge, with exception of period of army service; associated with his father, Allison O. Smith, until his death in 1923. In 1918 attached to Bureau of Aircraft Production, Washington, District of Columbia, for eight months, first as private, then as second lieutenant; referee in bankruptcy, 1923-29; member of Democratic State Committee, 1932-33; elected judge, November 7, 1933; married to the former Elizabeth Rimer.

Charles G. Hubbard, McKean County, Smethport, Forty-eighth Judicial District (1933-44), was born March 21, 1883, in Kane, McKean County; was graduated from Kane High School in 1900 and from the University of Michigan Law School at Ann Arbor in 1906; admitted to the bar of McKean County the same year; elected to Kane Borough School Board in 1925; elected district attorney of McKean County in 1927 and reelected in 1931; elected judge in 1933.

Jesse C. Long, Jefferson County, Brookville, Fifty-fourth Judicial District (1935-46). Elected November, 1935.

Northwestern Pennsylvania has been represented upon the Supreme Court bench many times, the latest to be so honored being William M. Parker, LL. D., who assumed office on December 13, 1941. He was a former president judge of Venango County, elected in 1925 and serving to his appointment as judge of the Superior Court a post he filled most capably until his elevation to the Supreme Court bench upon the above date. Justice Parker was born at Oil City, Venango County, December 19, 1870, and was graduated from Princeton University in 1891, with the degree Bachelor of Arts. He taught mathematics in the Oil City High School for two years, and was admitted to the bar in January, 1895. Grove City College awarded him the degree Doctor of Laws in 1930. He was president of the Oil City Chapter of the American Red Cross Society during the First World War, and is identified with a number of civic and other organizations. Judge Parker married the former Helen Innis and is the father of five children.

In the year 1942 the sole representative from northwestern Pennsylvania, then a member of the Superior Court, was Judge William E. Hirt, whose notable career has been associated with the metropolis and most populous county of this part of the State. He was born in Erie on May 13, 1881, the son of Charles F. and Mary Elizabeth (Melhorn) Hirt; educated at Erie High School and Princeton University; earned degree of Bachelor of Arts at Princeton and honorary degree of Doctor of Civil Law was conferred upon him at Thiel College; an attorney-at-law, entitled to practice in all courts; was judge of Common Pleas Court, Erie, March 1, 1920, to March 13, 1939, resigning to become a judge of Superior Court; vice-president of Erie Community Chest, and a member of the board for twenty years; president of Erie Philharmonic Society; he has always been active in civic and community affairs—director of Child-Parent Department of the Erie Welfare Bureau, director of Erie Boys' Club

for twenty-one years and was president and a member of Erie School Board for many years before his elevation to the bench; during World War I he was a member of the legal advisory board, a "four-minuteman" and chairman of the professional division of all Liberty Loan drives; is a Lutheran and active in the affairs of his church, serving two terms as trustee of the United Lutheran Church of America; member of the Masonic fraternity since 1905; belongs to the Knights of Pythias, the Shrine, the North East Grange, the University, Kahkwa and other clubs; married to the former Emma Lejeal Spafford; one son. Appointed by Governor James on March 8, 1939, to fill the unexpired term of Judge Arthur H. James on the Superior Court bench; elected for a full term of ten years at the November 7, 1939, election.

The legal business of a county is only handled in part by the judges of the Court of Common Pleas, or the higher courts of the Commonwealth. Each county is supposed to take care of its own affairs as touching the law, so far as is possible, and to this end has a number of elected and appointed officials. Although a sharp line of distinction cannot be drawn between court officials of a county and civil officials, we venture to present the following list of court officials in each of the twelve counties of northwestern Pennsylvania:

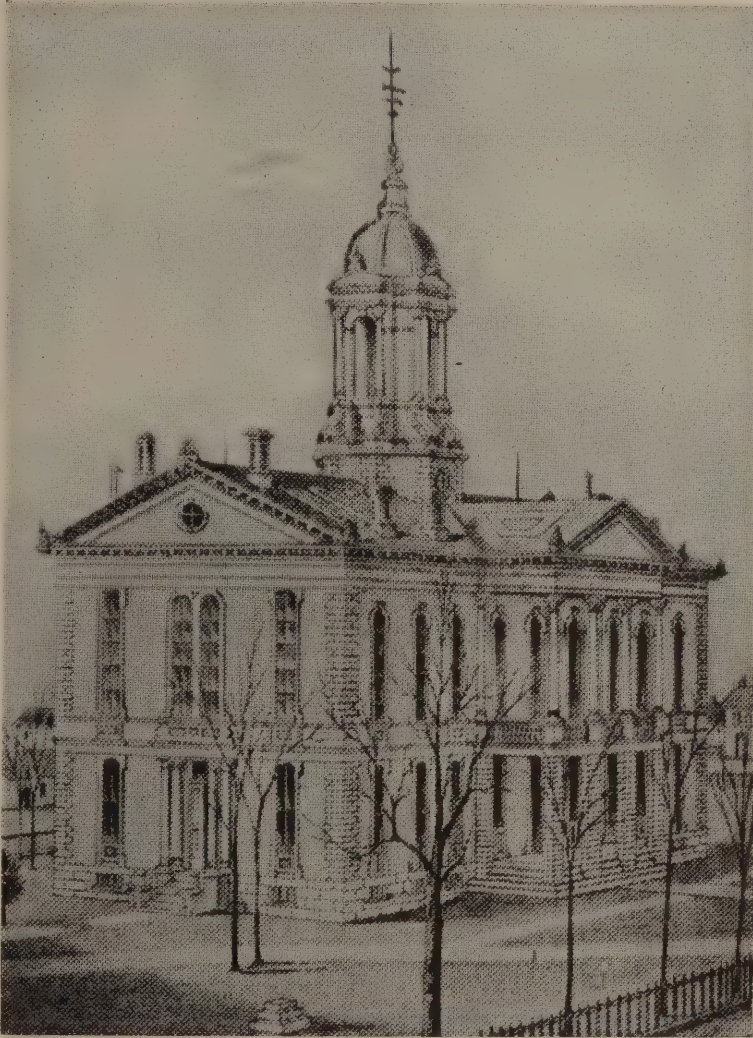
Cameron County—Sheriff, Fred Williams; prothonotary, register, recorder and clerk of Court of Quarter Sessions and Orphans' Court, Fred A. Moore; district attorney, Edwin W. Tompkins; solicitor, John D. Gresimer; jury commissioners, T. S. Fulton and Lamont N. Kreider; associates judges, Bernard G. Erskine and C. W. Rishell; coroner, Dr. W. H. Bush; sealer of weights and measures, J. B. Tilburg.

Clarion County—Sheriff, W. O. Mong; register, recorder and clerk of Orphans' Court, William H. Thompson; prothonotary and clerk of Court of Quarter Sessions, Arthur Gillinger; district attorney, W. P. Geary; solicitor, A. A. Geary; jury commissioners, A. W. Neely and W. K. Baumgardner; coroner, H. M. Wellman, M. D.; sealer of weights and measures, James B. Carlos.

Clearfield County—Sheriff, Morris S. Jones; prothonotary and clerk of Court of Quarter Sessions, J. Harold McFadden; register, recorder and clerk of Orphans' Court, George W. Gaylor; district attorney, Edward T. Kelley; solicitor, Smith and Maine; jury commissioners, George B. Shugarts and Ralph J. Smith; surveyor,

E. D. Billotte; coroner, Dr. E. S. Erhard; sealer of weights and measures, Percy C. Holton.

Crawford County—Sheriff, Bert A. King; prothonotary, Paul D. Slayton; register and recorder, Ray F. Smock; clerk of Court of



Mercer County's Second Court House

Quarter Sessions and Orphans' Court, Martha E. Britton; district attorney, Herbert A. Mook; solicitor, Walter J. McClintock; jury commissioners, N. B. Graham and George J. Slattery; coroner, Luther B. King; sealer of weights and measures, Harry Britton.

Elk County—Sheriff, Raphael J. Goetz; prothonotary and clerk of Court of Quarter Sessions and Orphans' Court, C. F. Dickinson; register and recorder, F. A. Robison; district attorney, Edward J. Blatt; solicitor, John H. Cartwright; jury commissioners, Allie J. Eckert and Arthur L. Johnson; associate judges, Lyle G. Hall and Leroy C. Straessley; coroner, Dr. Stanley Barratt; sealer of weights and measures, Joseph Dambacher.

Erie County—Sheriff, Fred W. Lamberton; prothonotary, Lawrence W. Taylor; register and clerk of Orphans' Court, Ralph B. McCord; recorder, Harry Miller; clerk of Court of Quarter Sessions, George L. Wilson; district attorney, Burton R. Laub; solicitor, J. B. Held; jury commissioners, Harry E. Wagner and Katherine T. Leary; coroner, Dr. W. C. Stroble; sealer of weights and measures, Park M. Skelton.

Forest County—Sheriff, J. Bruce Hagerty; prothonotary, register, recorder, and clerk of Court of Quarter Sessions and Orphans' Court, J. N. Bankhead; district attorney, M. A. Carringer; solicitor, A. C. Brown; jury commissioners, Charles Clark and Edward Mensch; associate judges, E. S. Blauser and Edwin Otto Burcher; coroner, Eugene Pifer; sealer of weights and measures, J. B. Carlos.

Jefferson County—Sheriff, Dale Grant; prothonotary and clerk of courts, David L. Holt; register and recorder and clerk of Orphans' Court, Walter Evans; district attorney, William A. Sykes; solicitors, George H. Kurtz and Lavelle A. Wilson; jury commissioners, Arthur Schreckengost and W. H. Cramer; coroner, Gilbert Hulme; sealer of weights and measures, Frank Crozier.

McKean County—Sheriff, George D. Calhoun; prothonotary, clerk of Common Pleas, Quarter Sessions and Oyer and Terminer, Joseph R. Carvolth; register and clerk of Orphans' Court, Ralph E. Scott; recorder, A. R. Anderson; district attorney, C. W. Shattuck; solicitors, Gallup, Potter and Gallup; jury commissioners, Lewis W. McCloskey and Frank Cantwell; coroner, Thomas R. Clark; sealer of weights and measures, L. P. Thompson.

Mercer County—Sheriff, Alex Elliott; prothonotary, Harry W. Kremis; register and clerk of Court of Quarter Sessions and Orphans' Court, F. L. Hutchison; recorder, Stephen Lukacs; district attorney, Edwin C. Moon; solicitor, Nathan Routman; jury commissioners, L. E. Lytle and W. A. Bone; coroner, James A. Biggins, M. D.; sealer of weights and measures, Harry Hunter.

Venango County—Sheriff, James C. Marshall; prothonotary and clerk of Court of Quarter Sessions, Roy P. Nelson; register and recorder and clerk of Orphans' Court, Richard I. Fry; district attorney, Daniel J. Skelly; solicitor, F. Harold Gates; jury commissioners, Mrs. W. J. James and James Ahearn; coroner, Paul E. Cunningham; sealer of weights and measures, R. A. Pringle.

Warren County—Sheriff, William C. Stuart; prothonotary and clerk of Court of Quarter Sessions, Addison White; register and recorder and clerk of Orphans' Court, O. E. Loper; district attorney, Joseph H. Goldstein; jury commissioners, John E. King and L. E. Lindquist; coroner, Ed. C. Lowrey; sealer of weights and measures, W. Robert Walsh.

CHAPTER IX

Petroleum, Nature's Wonder Gift to Man

Petroleum, called also mineral oil, rock oil, crude oil, is a dark, inflammable liquid produced by natural processes and accumulated within certain rock formations beneath the earth's surface. It is usually associated with natural gas. In recent years the demand for the products obtained by refining crude oil, such as gasoline, kerosene, fuel oils, lubricating oils, waxes and asphalts has so greatly increased that petroleum now ranks second only to coal as the source of the world's energy.

The variety of these derivatives is an indication of the complexity of the parent substance, which consists of a mixture of various hydrocarbons, compounds of hydrogen and carbon. Crude oil is the most complex mixture of hydrocarbons known to man; it is not a homogeneous but a heterogeneous mixture of hydrocarbons, and its composition varies depending upon the place in which it is found.

There are three major classifications of petroleum—paraffin base, asphalt base, mixed base.

The first mentioned is an oil which contains very little asphalt but yields hydrocarbons of the so-called paraffin series. Paraffin wax, as it is popularly known, is one of the solid compounds of this series. Some of the well-known paraffin base oils are those from the Pennsylvania, West Virginia, north Louisiana, Ranger and certain of the Mid-Continent fields. Generally speaking, the paraffin base oils are the most valuable. This is due, particularly, to the valuable lubricating oils and cylinder stocks contained therein, but in addition, these oils usually show a high yield of gasoline.

The asphalt base crudes leave as a residue, a heavy pitch or asphalt. Predominating in this residuum are hydrocarbons of the naphthene series; California, certain Texas and the heavy Mexican oils are of this class. A mixed petroleum is one in which both of the above compounds are found. Illinois, some of the Mid-Continent and light Mexican oils are of this class.

The three classes of crudes are handled somewhat similarly, but the yields of products are quite different. Paraffin base oils are usually run with every effort to avoid cracking or decomposition by heat. They yield the bulk of our high grade lubricants. Asphalt base crudes are commonly run to asphalt, flux or residual fuel oil and, if a maximum yield of light products is desired, are sometimes run to coke. Many crudes of this nature yield lubricants from the distillates when run to flux or coke. Mixed base oils are usually run to a fuel oil residual unless the yield of lubricating distillates warrants further reduction to flux or coke.

When paraffin base crudes are refined for a maximum yield of lubricating oils the residual product possesses characteristics suitable for manufacture into steam cylinder oils. The phrase "running to cylinder stock" has resulted. For a maximum yield of light oils from asphalt or mixed crudes decomposition by heat was formerly practiced, but this method has been superseded by atmospheric and even vacuum distillation. When these crudes are distilled to a solid residuum, the process is termed "running to coke."

The source of the hydrocarbons composing petroleum was formerly in dispute. Some of the authorities believed they resulted from the action of water on carbon compounds, especially iron carbide, in the hot interior of the earth, whence they rose gradually nearer the surface through pores and cracks in the overlying rocks. Most geologists and chemists now hold, however, that petroleum is the product of the partial decay of organic matter. In this it is closely related to coal.

Although such marine animals as fish, mollusks, crustaceans and foraminifers may have been important in the formation of some oil deposits, it is probable that the largest rôle has been played by marine plants. Diatoms, algae, seaweeds, fragments of higher forms, with spores, seeds, and pollen of land plants accumulated in near-shore deposits of shallow or moderate depth, would be intimately mixed with and imprisoned in fine silt from the land. The oxygen in the organic matter would be largely removed through the attack of anaerobic bacteria. Thus, hydrogen and carbon compounds would predominate in the residues of this partial decay. The decomposition would finally be halted through the complete covering of the material by later deposits. Although the process is one which can go on in fresh or sea water, marine deposits are thought to have been the source of most mineral oils.



Cottage Hill, Oil City, 1863

Petroleum may be produced directly in this manner, but many observers believe that an intermediate substance, Kerogen, is the direct product. It consists of globules and laminae of yellow to black carbonaceous matter found in so-called Oil Shales. Since petroleum-like oil can be produced from kerogen shales by heat or pressure, it is thought such shales represent the compacted silts impregnated with partially decayed organic remains. When they are subjected to considerable squeezing or heating, or both, during movements of rocks of the earth's crust, a progressive distillation takes place which produces gaseous and liquid hydrocarbons, and carbonized residues.

Clay or shale containing oil and gas formed by either process mentioned will retain them in the fine pore spaces unless they are forced out by pressure, or the superior capillary attraction of water. When thus forced out, the petroleum and gas will naturally circulate through the most porous formation available, such as sandstone, fissile shale, or cavernous limestone. Because both substances are lighter than water, and water is found in most buried rock strata, they will migrate toward the surface. Unless trapped behind an impervious barrier, they will reach the surface and be lost. Shale beds, igneous Dikes, salt domes and Faults in which there occurs a gouge, or clayed material, serve as excellent barriers. The most favorable situation for the accumulation of oil and gas is where some structural irregularity, such as an anticline or arch, in porous rocks, is capped by impervious beds. Gas will gather in the pores of the highest parts of the "reservoir" rock, while next below it, as on the flanks of an anticline, will be found the oil. Lower still occurs the salt water usually associated with petroleum. Porous sandstones and cavernous limestones involved in some structure as that described, and not far distant from kerogen shales, have been observed to present favorable conditions for the occurrence of oil deposits, or oil pools.

Oil-producing beds may be from two or three feet to two hundred feet thick, and their porosity varies from five per cent. to fifty per cent. A sandstone, or sand as it is called by oil men, with an average porosity of twenty per cent. will hold 1,550 barrels of oil per acre for every foot of its thickness, but will yield only about 20 per cent. of this under ordinary extraction methods.

Oil pools are exploited by drilling a hole a few inches in diameter through the overlying formations, puncturing the impervious cap and penetrating the reservoir rock. The oil often seeps into this hole or well, and is pumped out, but not infrequently the pressure of the

entrapped gas produces an almost explosive rush of the petroleum, resulting in a "gusher." Commercial production is obtained from deposits as deep as almost two miles below the surface, as in California. Oil beds are mined, as in Pechelbronn, France, but this is rare.

Formerly oil pools were located largely by "wildcatting," or drilling almost at random. Nowadays, however, careful geological examinations are made before going to the expense of drilling. Surface seeps of oil are looked for, the occurrence of kerogen shales investigated, and geological structures carefully mapped to determine whether or not a given region is favorable for the origin and accumulation of crude oil. In the study of geological structures the new science of Geophysics has proven of great aid.

The great oil producing formations of the world are of Paleozoic, Cretaceous and Tertiary ages, they having produced, respectively, forty-one per cent., fifteen per cent., and forty-four per cent. of the world's total. Within the United States the Paleozoic rocks are productive in the Middle West and East, or Mid-Continent and Appalachian fields, Cretaceous ones in the Rocky Mountain and Gulf Coast regions, and Tertiary in the Gulf Coast and California. Elsewhere than in North America, development is almost entirely in Tertiary rocks.

One facetious writer has said: "Petroleum, a name to conjure with and weave romances around, helps out Solomon's oft misapplied declaration of 'Nothing new under the sun.' Possibly it filled no place in domestic economy when the race, if the Darwinian theory passes muster, sported as ring-tailed simians, yet the Scriptures and primitive writers mention the article repeatedly.

"Many intelligent persons, recalling the tallow-dip and lard-oil lamp of their youth, consider the entire petroleum business as of comparative recent date, whereas its history goes back to the remotest antiquity." So wrote this author about fifty years ago.

Although petroleum was used in lamps in the times of Herodotus and Pliny and it is mentioned frequently by the very earliest writers and used by the American Indians long before the advent of the white man in this part of the world, commercial production did not properly begin until 1859, following the drilling of the Drake well.

The Antiquity of Petroleum and Its Uses in Ancient Times—Various authorities, ancient and scriptural, make mention of or allude to petroleum in some of its forms, from which it may be inferred that its uses were known to those who lived in the earliest periods of civilization. The name is said to be derived from the Greek words Petros

and Elaion, signifying Rock Oil. In ancient days it was more commonly found in the form of asphaltum than in any other, and its first use of which we can find any record, was as mortar or cement for masonry. It has been found in a great variety of forms, and used for a number of purposes, and in all has been an article of general utility.

The following scriptural references are made to petroleum:

Deuteronomy xxxii, 13: "He set him upon high land: that he might eat the fruits of the fields, that he might suck honey out of the rock, and oil out of the hardest stone."

Job xxix, 6: "When I washed my feet with butter, and the rock poured me out rivers of oil."

Micah vi, 7: "Will the Lord be pleased with thousands of rams, or ten thousands of rivers of oil."

Genesis xiv, 10: "Now the woodland vale had many pits of slime."

Mention is made of its use in the building of the ancient city of Babylon. Herodotus, the celebrated historian, says, in this connection: "Digging a fosse or ditch, the earth which was cast up they formed into bricks, and desiring large ones, they burned them in furnaces, using for lime or mortar, hot asphaltas, or bitumen." He further relates that this bitumen was brought from the river Is, a tributary of the Euphrates.

Cartwright, a traveler of the eighteenth century, speaks of this same river Is, as follows: "From the ruins of old Babylon, we came to a town called Ait (the modern Heet), near unto which town is a valley of pitch, very marvellous to behold, and things almost incredible, wherein are many springs, throwing out abundantly a kind of black substance, like unto tar or pitch, which serveth all the countries thereabouts, to make staunch their barks and boats, every one of which springs, makes a noise like a smith's forge, which never ceaseth night or day, and the noise is heard a mile off swallowing up all weighty things that come upon it."

A later traveler, Mr. Rich, says: "The principal bitumen pit at Heet has two sources, and is divided by a wall in the center, on one side of which the bitumen bubbles up, and on the other, the oil of naphtha."

Curtius, Diodorus, Siculus, Bochart, Josephus, all speak of bitumen as forming a constituent of the mighty walls, lofty towers, and pensile gardens of Babylon, that were the wonder of the world.

Layard, in his "Nineveh and Babylon," gives the following account of a bitumen pit on fire, which will compare in general respects with many of the scenes witnessed on Oil Creek, in the early days of the oil excitement of this region. He says: "Tongues of flame and jets of gas driven from the burning pit, shot through the murky canopy. As the fire heightened, a thousand fantastic forms of light played amid the smoke. In an hour the bitumen was exhausted for the time, the dense smoke gradually died away, and the pale light of the moon shone over the black slime-pit."

Kerr Porter, and other modern travelers to Assyria, state that in many places bituminous and naphtha wells exist, and that in the remains of the famous tower of Ackerouf, near the ruins of Bagdad, in ancient Chaldea, contemporary with the tower of Babel, the very reeds mixed with this material, are still preserved, although the brick and stone work has almost fallen into dust.

After a lapse of thirty-five centuries, with all that time could accomplish in corroding and destroying the work of man, the remains of these petroleum cemented walls and towers exist, and are looked on by moderns. Fragments of bricks, with the asphaltum still clinging to them, are still exhumed from the ruins of ancient cities.

One writer states: "The substance was used by the Egyptians, as early as history can furnish us the facts of the times. From the accounts at the close of the Book of Genesis, of the embalming of Jacob and Joseph, it is plain to infer that embalming was a common process then, 1700 years before Christ." Dr. Pettigrew in his history of "Egyptian Mummies," states, that many of the mummies he exhumed had the cavities of the bodies filled with asphaltum. A French writer, on the same subject, quoted by Pettigrew, says these were often immersed in liquefied pitch, a composition formed of common pitch and asphaltum. Modern research and observation would seem to confirm this assertion of the extensive use of petroleum in the process of embalming. The color, the odor, the inflammable nature of the mummy, all indicate its presence. The cerements, and even the body itself, were used by the wandering Arab as fuel, and modern travelers in those regions have used them for the same purpose. It was also used in the manufacture of the ancient papyrus, as an agglutinant, to prevent the attacks of insects, and the corroding effects of time.

Thus it will be seen that from days so ancient that history would be unintelligible were it not for the light that has been shed from the Book of Books, a continuous history of the product is furnished down to modern times. On every continent, and on almost every island, it

has been found, cropping out in some form or other, giving visible indications of its presence, and it has always occupied a prominent place in the arrangements of mankind, as an article of utility. In modern times petroleum has been found in various parts of the world.

In northern Italy, in Duchies of Parma and Modena, petroleum has been extracted from the earth since its first discovery in 1640, the method pursued being merely to sink pits in the ground, and collect the oil that exudes from the soil, in little basins on the bottoms of the pits.

The Rangoon districts on the Irrawaddy, in Burma, are quite wonderful for their immense production of petroleum. For an unknown period the whole Burma Empire, and a considerable portion of India, have been supplied with oil from this source. The trade was one time carried on by large boats that came down the Irrawaddy to the town of Rainanghong, a place inhabited by potters, who were constantly making the earthen jars in which the oil was kept. These were piled up in great pyramids about the town, ready for use. The wells were in beds of sandy clays, which rest on sandstones or argillaceous slates, and were sunk to the depth of sixty feet. Under the slates it was said there was coal. Symes' "Embassy to Ava," Vol. II, states that the number of wells in this vicinity exceeded 520, and the annual yield of petroleum was over four hundred thousand hogsheads. The natives used the oil in lamps, for preserving timber against insects, and as a medicine.

The following are extracts from the journal of John Crawford, Ambassador of the Governor-General of India to the Court of Ava, in 1826. London: published for Henry Colburn, 1834.

Volume I, page 93:

"At three in the afternoon our whole party proceeded to the celebrated Petroleum wells. Those which we visited cannot be farther than three miles from the village, for we walked to them in forty minutes. The cart-road which leads to them is tolerably good, at least for a foot-traveler. The wells altogether occupy a space of about sixteen square miles. The country here is a series of sand-hills and ravines, the latter torrents after a fall of rain, as we now experienced, and the former covered with a very thin soil or altogether bare. The trees, which were more numerous than we looked for, did not rise above twenty feet in height. The surface gave no indication, that we could detect, of the exist-

ence of the Petroleum. On the spot which we reached were eight or ten wells, and we examined one of the best. The shaft was of a square form, and its dimensions about four feet to a side. It was formed by sinking a frame of wood, composed of the beams of the *Mimosa catechu*, which affords a durable timber. Our conductor, a son of the Myosugi of the village, informed us that the wells were commonly from 140 to 160 cubits deep, and their greatest depth in any case was two hundred. He informed us that the one we were examining was the private property of his father—that it was considered very productive, and that its exact depth was 140 cubits. We measured it with a good lead line, and ascertained its depth to be 210 feet; thus corresponding exactly with the report of our conductor, a matter which we did not look for, considering the extraordinary carelessness of the Burmans in all matters of this description. A pot of oil being taken up, and a good thermometer being plunged into it, indicated a temperature of 90° . That of the air, when we left the ship, an hour before, was 82° . To make the experiment perfectly accurate, we ought to have brought a second thermometer along with us, but this we neglected. We looked into one or two of the wells, and could discern the bottom. The liquid seemed as if boiling, but whether from the emission of gaseous fluids, or simply from the escape of the oil itself from the ground, we had no means of determining. The formation where the wells are sunk, consisted of sand, loose sand-stone, and blue clay. When the well is dug to a considerable extent, the laborers informed us that brown coal was occasionally found. Unfortunately, we could obtain no specimens of this mineral on the spot, but I afterward obtained some in the village. The Petroleum itself, when taken out of the well is of a thin, watery consistence, but thickens by keeping, and in the cold weather it coagulates. Its color, at all times, is a dirty green, and not much unlike that of stagnant water. It has a pungent, aromatic odor, offensive to most people. The wells are worked by the simplest contrivance imaginable. There is over each well, a cross-beam, supported by two rude stanchions. At the center of the cross-beam, and embracing it, is a hollow revolving cylinder, with a channel to receive a dragrope, to which is suspended a common earthen pot, that is let down into the well, and brought up full by the assistance of two persons pulling the rope down an inclined

plane by the side of the well. The contents of the pot are deposited for the time in a cistern. Two persons are employed in receiving the oil, making the whole number of persons engaged on each well only four. The oil is carried to the village or ports in carts, drawn by a pair of bullocks, each cart conveying from ten to fourteen pots of ten viss each, or from 265 to 371 pounds avoirdupois of the commodity. The proprietors store the oil in their houses, and then vend it to the exporters. The price varies, according to the demand, from four ticals of flowered silver to six ticals per 1,000 viss; which is from five pence to seven pence half penny per 100. The carriage of so bulky a commodity, and the breakage to which pots are so liable, enhances the price in the most distant parts to which the article is transported, to fifty ticals per 1,000 viss. Sesamum oil will cost at the same place not less than 300 ticals for an equal weight, but it lasts longer, gives a better light, and is more agreeable than the Petroleum, which in burning, emits an immense quantity of black smoke, which soils every object near it. The cheapness, however, of this article is so great, that it must be considered as conducing much to the comfort and convenience of the Burmans. Petroleum is used by the Burmans for the purpose of burning in lamps, and smearing timber to protect it against insects, especially the white ant, which will not approach it. It is said that about two-thirds of it is used for burning, and that its consumption is universal until its price reaches that of sesamum oil, the only oil which is used in the country for burning. Its consumption, therefore, is universal wherever there is water carriage to convey it—that is, in all the country watered by the Irrawaddy, its tributary streams and its branches. It includes Bassien, but excludes Martaban, Tavoy, and Mergui, Aracan, Tongo, and all the northern and southern tributary states. The quantity exported to foreign parts is a mere trifle, not worth noticing. It is considered that a consumption of thirty viss per annum for each family of five and a half persons is a moderate average. If it were practical, therefore, to ascertain the real quantity produced at the wells, we should be possessed of the means of making a tolerable estimate of the inhabitants who make use of this commodity, constituting the larger part of the population of the kingdom. Of the actual produce of the wells, we received

accounts not easily reconcilable to each other. The Burmans, perhaps, less from a disposition to impose than from an incapacity to state any facts of the nature with precision, could not be relied on, and we had no registers to consult. The daily produce of the wells was stated, according to goodness to vary from 35 to 500, the average giving about 235 viss. The number of wells was sometimes as low as fifty, and sometimes as high as 400. The average made about 200, and considering they are spread over sixteen square miles, as well as that the oil is well known to be a very general article of consumption throughout the country, I do not think the number exaggerated. This estimate will make the consumers of Petroleum for burning amount to 2,066,721. In the narrative of one of my predecessors, Captain Cox, the number of wells is given as high as 520, and the average daily produce of each well is reckoned at 300 viss, which makes the whole amount produced 56,940,000. Calculating as before, this produce will give a population of 6,959,331. This is a much higher estimate than my rough data afford, but even this gives a very low estimate of the probable population of the empire. Calculations formed from such crude materials, and which would be justly disregarded, were means of gaining more accurate information within reach, have their value in a country in which exact details are never procurable upon any question of statistics."

Volume II, page 23:

"Dr. Wallich and myself this morning visited the Petroleum wells, and examined several of them, we took the temperature of two of them carefully, with a good thermometer, the thermometer being immersed in a pot of oil just drawn from one of these, which was 130 royal cubits, or 207 English feet in depth, rose to 80°. In the shade the temperature was at the same time 60°. In a pot of oil drawn from another well, in which the liquid was much less mixed with water, and which was 140 royal cubits, or 222 feet and 8 inches deep, the heat indicated by the thermometer was 90°. In going over the ground, we observed several old wells altogether abandoned. The natives informed us that in digging new ones, they came, at a considerable depth, to coal and fossil-shells; of the latter we could, unfortunately, obtain no speci-

mens, but of the former, which proved to be brown coal, we obtained one or two good ones at the village of Benangyun. The oil drawers stated to us that in cleaning out old wells, accidents sometimes happened from the fire damp, and they pointed out a particular well at which two men had lost their lives from this cause."

Page 178:

"The celebrated Petroleum wells afford, as I ascertained at Ava, a revenue to the King, or his officers. The wells are private property, and belong hereditarily to about thirty-two individuals. A duty of five parts in one hundred is levied on the Petroleum as it comes from the wells, and the amount realized on it is said to be 25,000 ticals per annum. No less than 20,000 of this goes to contractors, collectors, or public officers, and the share of the State, or 5,000, was assigned during our visit as a pension of one of the Queens."

Page 206:

"The Petroleum wells of Renangyorong have already been described in the Journal. From the more accurate information, which I obtained at Ava, it appears that the produce of these may be estimated at the highest, in round numbers, at 22,000,000 of viss, each of three sixty-five one hundredth pounds avoirdupois. This estimate is formed from the reports of the Myo. Thugyi, who rents the tax on the wells, which is five in a hundred. His annual collection is 25,000 ticals, and he estimated, or conjectured, that he lost by smuggling 8,000, making the total 33,000. The value of the whole produce, therefore, is 660,000 ticals. The value of the oil on the spot, is reckoned at three ticals per 100 viss, and consequently its amount will be as above stated."

Page 238:

"I should observe that Petroleum is universally used, wherever the navigation of the Irrawaddy and Ryendwen, with their tributary streams, will allow of its being conveyed, and that it is also carried to a considerable extent by land carriage. It is universally consumed in Pegu, from Bassien to Martavan, and throughout the whole of upper Ava, embracing the greatest portion of the area of the kingdom, and unquestionably all the best inhabited part of it.

In 1765, Major Michael Symes, of the English Army, was sent by the Governor-General of India as Ambassador to the Court of Ava. Extracts in reference to petroleum from the narrative of Major Michael Symes, published in 1800 by Bulmer & Company, in London, follow.

Page 261:

"After passing various sands and villages, we got to Yaynangheoum or Earth Oil (Petroleum) Creek, about two hours past noon. We were informed that the celebrated wells of Petroleum, which supply the whole empire and many parts of India with that useful product, were five miles to the east of this place. The mouth of the creek was crowded with large boats, waiting to receive a lading of oil, and immense pyramids of earthen jars were raised within and around the village; disposed in the same manner as shot and shells are piled in an arsenal. This is inhabited only by potters, who carry on an extensive manufactory, and find full employment. The smell of the oil is extremely offensive. We saw several thousand jars filled with it, ranged along the bank; some of these were continually breaking, and the contents, mingling with the sand, formed a very filthy consistence, Mr. Wood had the curiosity to walk to the wells, but, though I had felt the same desire, I thought it prudent to postpone visiting them until my return, when I was likely to have more leisure, and to be less the object of observation."

Page 441:

"We rode until two o'clock, at which hour we reached Yaynangheoum, or Petroleum Creek, a place already noticed in our journey up the river. Dr. Buchanan partook of an early dinner with me, and when the sun had descended so low as to be no longer inconvenient, we mounted our horses to visit the celebrated wells that produce the oil, an article of universal use throughout the Empire."

Page 442:

"The evening being far advanced, we met but few carts, those we did observe were drawn by a pair of oxen, and of a length disproportionate to the breadth, to allow space for earthen pots that contained the oil. It was a matter of sur-

prise to us, how they could convey such brittle ware with any degree of safety over so rugged a road. Each pot was packed in a separate basket and laid in straw, notwithstanding which precaution, the ground, all the way, was strewn with broken fragments of the vessels, and wet with oil, for no care can prevent the fracture of some in every journey. As we approached the pits, which were more distant than we had imagined, the country became less uneven, and the soil produced herbage. It was nearly dark when we reached them, and the laborers had retired from work. There seemed to be a great many pits within a small compass. Walking to the nearest, we found the aperture about four feet square, and the sides lined, as far as we could see down, with timber; the oil is drawn up in an iron pot, fastened to a rope passed over a wooden cylinder, which revolves on an axis, supported by two upright posts. When the pot is filled, two men take hold of the rope by the end, and run down a declivity, which is cut in the ground, to a distance equivalent to the depth of the well. Thus, when they reach the end of the track, the pot is raised to its proper elevation, the contents, water and oil, together, are then discharged into a cistern, and the water is afterwards drawn through a hole in the bottom. Our guide, an active, intelligent fellow, went to a neighboring house, and procured a well rope, by means of which we were enabled to measure the depth, and ascertained it to be thirty-seven fathoms, but of the quantity of the oil at the bottom we could not judge. The owner of the rope, who followed our guide, affirmed that when a pit yielded as much as came up to the waist of a man, it was deemed tolerably productive, if it reached his neck, it was abundant; but that which rose no higher than the knee, was accounted indifferent. When a well is exhausted, they restore the spring by cutting deeper in the rock, which is extremely hard in those places where the oil is produced. The government farms out the ground which supplies this useful commodity, and it is again let to adventurers, who dig wells at their own hazard, by which they sometimes gain and often lose, as the labor and expense of digging are considerable. The oil is sold on the spot for a mere trifle—I think 200 or 300 pots for a tackal, or half a crown.

The principal charge is incurred by the transportation and purchase of vessels. We had but half gratified our curiosity, when it grew dark, and our guide urged us not to remain any longer, as the road was said to be infested with tigers that prowled about at night among the rocky, uninhabited ways through which we had to pass. We followed his advice, and returned with greater risk, as I thought, of breaking our necks from the badness of the road, than of being devoured by wild beasts. At ten o'clock we reached our boats without any misadventure."

In the vicinity of the Caspian Sea, the Bakoo springs have yielded large quantities of oil from time immemorial, and were widely celebrated throughout that region. The oil, under the name of naphtha, was very generally burned for its light.

As far back into the ages of the past as we have any record, asphaltum has been found on the shores of the Dead Sea. This sea, as is well known, is of supposed volcanic origin; and is the probable site of the cities of Sodom and Gomorrah. Its surface is one thousand three hundred feet below the surface of the ocean, and it has been fathomed to the depth of two thousand feet. In several places, no bottom has been found, and owing to internal convulsions, the depth changes from time to time. The water is very dense, holding in solution twenty-five per cent. of solid matter, of which seven per cent. is salt. The bituminous substance is thrown up from below, and towards the center of the sea, it is found in a liquid state, like petroleum; but is probably solidified by evaporation, as it appears on the shore in hard, compact masses.

Upon the West Indies Islands, or, rather, several of them, it was found to exist in various forms, known as chapapote, Barbados tar, etc. Its existence was also early apparent in various parts of South America. The most remarkable natural fountain of petroleum known is on the island of Trinidad, in the West Indies. It is called by the inhabitants Tar Lake. Bitumen, in a hot state, is continually boiling up, and it has formed a lake several miles in circumference. In the center, or, at the mouth of the fountain, the oil is hot and liquid, but as it recedes in every direction, it gradually cools and thickens, until, on the shores, it becomes solid. Humboldt also reports the spontaneous product of petroleum in the West Indies Islands to be large, and as it ran to waste, it covered a large surface of the sea with its unctuous tide. This report was made in 1799.

Having thus traced petroleum in several of its connections, we will now turn to others no less curious. China, the land of everything old and new, next claims attention. That famous traveler, the Abbe Huc, gives a literally glowing description of the natural gas found issuing from the surface of the soil in various portions of the Celestial Empire. Every rich Chinese, in the regions where the product was discovered, if he knew nothing else, knew enough to have his own fire well, as he graphically called it. The Chinaman is a patient fellow, and seldom fails. He had a long tube, about six inches in diameter, to drill or bore with, generally to a depth of one thousand five hundred to two thousand feet, and by the employment of some very odd machinery, he bored on till he reached the volcanic cavities below. Then rushed forth the inflammable gas, in a huge jet, that leaped like a black arrow, hundreds of feet into the air, and was finally mastered at no little expense, or difficulty, and danger. The least touch of flame, and an awful catastrophe was the result.

A noted Catholic missionary, Monseigneur Imbert, who was, in 1833, assigned to the province of Slo-Tchouch, celebrated for its fire wells, and who is quoted by the great Humboldt, in his "Fragments of Geology," describes a catastrophe of this kind that occurred at the Tsee-Lieon-Tsing (or well flowing of itself), in the great oil and gas regions. It caught fire in a twinkling, a frightful explosion was heard, followed by a shock of earthquake.

The narrator says:

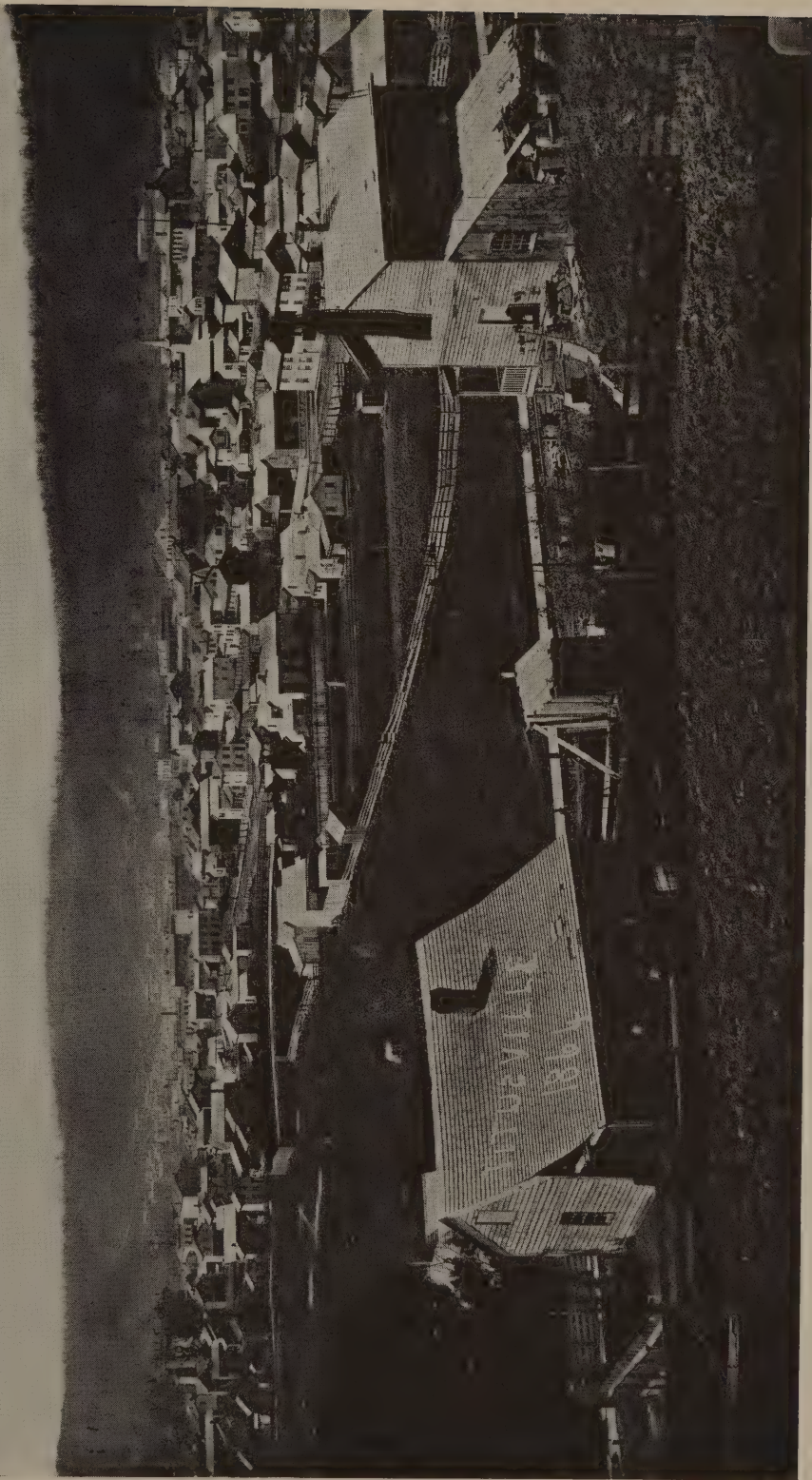
"The flame, which was about twenty feet high, flitted about without burning anything. Four men volunteered to risk their lives in endeavoring to arrest it. They cast a large stone on the mouth of the well, but it was instantly hurled far into the air. Three of the men were burned, the fourth one only escaping by almost a miracle. Neither water nor earth would extinguish the flames, until at length, after two weeks of incessant toil, a sufficient quantity of water was conveyed to the adjacent heights, where it was collected in a little lake, and suddenly let loose on the well in one volume, with success."

When the mouths of these wells had been properly secured, the gas could be conducted to any quarter through tubes of bamboo, and, once lighted, it burned with a steady bluish and dark reddish flame, about four inches in height and one in diameter. It so continued, day and night, until artificially extinguished. The light was heavy, but sufficient for ordinary purposes. Monseigneur Imbert also describes

the uses to which this gas was put in the province of Kite-Sing-Tan, about two hundred leagues from Canton. There the wells were very numerous, and the gas was used to light the great salt mines, which also abounded in that district, and for fuel. One foot below the surface of the ground, on the four sides or faces of the well, were inserted four enormous bamboo tubes, which carried the gas beneath the boilers. Each boiler had its bamboo tube or fire conductor, at the extremity of which was an earthenware tip several inches in length; and an orifice in the center of about one inch in diameter. This tip kept the bamboo from burning. Other tubes, leading to the outside, illuminated the great halls and chambers of the workshops. It was impossible to utilize all the flame, and the excess was conducted to the outer air through immense chimneys, above which leaped their long tongues of flame. The surface of the ground above the tubes was made very warm, and even burned the feet. In the very depth of January, the workmen were all half naked, wearing a short pair of drawers. The flame of this gas produced no smoke; but a smell of bitumen could be perceived for miles around. The flame was of a dark red, like that of coal, and did not cling to the end of the tube, as that of an ordinary lamp, but hovered at the height of about two inches above it. In the winter time, the poor, in order to warm themselves, dug round cavities in the sand, a foot deep. A dozen of them crouched about it, then, with a handful of lighted straw, set fire to the cavity, and thus warmed themselves as long as they wished. When they saw fit, they filled up the hollow with sand, and so extinguished the flames.

As early as 1618, Jean Tardin, a physician, of Tournon, in France, gave to the world a curious and now very rare work, entitled "Natural History of the Burning Fountain, near Grenoble, with an Inquiry into the Causes and Principles, and an Ample Treatise on Subterranean Fires." Tardin went to work, enlightened by his own investigations, and after trying various substances, placed coal in a close vessel, over a slow fire, and so obtained the vaporous exhalations, which is our ordinary gas.

Tardin's experiments were followed by those of Thomas Shirley, who, in 1667, tested the contents of the Burning Well, so called, near Wigan, Lancashire, England, which he found burned like oil. He was succeeded by the Rev. John Clayton, who wrote a singular letter to Sir John Boyle, "Concerning the spirit of coals," and therein stated that he had seen a ditch where "the water burned like brandy." The country people boiled eggs and even meat in it. This letter was writ-



Titusville in 1864

ten previous to 1691, and is quoted in the "Philosophical Transactions of 1739," on pages 59 to 61 of the forty-first volume.

In Oriental Georgia, near to Bakoun, in the place known as Atesch Gah, or the Dwelling of Fire, were found wells, and pits of gas, and naphtha, used by the weavers of that country for heat and light.

In Hungary, in the "circle" of the Marmarosch, a gallery in the salt mine of Szalino, gave vent to a stream of bituminous gas, which was used to illumine the mine, and in Belgium similar accidents occurred at Liege, at Warmer, and near Charleroi. Van Nooth and Van Campen add to the narratives already given from China, by the description they offer of the fire wells in the city of Xen Si.

It also appears, to advert to a still more recent date, that the inhabitants along the Little Muskingum River, in Ohio, came very near discovering the importance of petroleum in 1819. Dr. S. P. Hildreth, of Marietta, in an account of the region, written in that year, and published in the "American Journal of Sciences" (1826). speaking of the borings for salt water, says:

"They have sunk two wells, which are now more than 400 feet in depth. One of them affords a very strong and pure water, but not in great quantity. The other discharges such vast quantities of petroleum, or, as it is vulgarly called, 'Seneca Oil,' and besides is subject to such tremendous explosions of gas, as to force out all the water, and afforded nothing but gas for several days, so that they could make but little or no salt. Nevertheless, the petroleum affords considerable profit, and is beginning to be in demand for lamps, for workshops and manufactories. It affords a brisk, clear light when burned this way, and will be a valuable article for lighting the street lamps in the future cities of Ohio."

"From the traces we thus find of bitumen, naphtha, and inflammable carbonic gas, in the most diverse and widely separated quarters of the globe" [says a writer in the year 1870], "we are irresistibly led to infer, that the interior of our planet is one huge laboratory, in which the various carboniferous deposits are being separated into oil and the gases that precede or accompany it, and that the lapse of time required by a far vaster population than the earth can now boast, to consume the internal accumulations already existing, would be infinitely more than enough to have them replaced by

fresh filterings, from the surface, of carbonic matter, the result of both animal and vegetable decay."

This writer continues:

"The next conclusion is, that, as the general supply must be practically inexhaustible, and as on this continent have been found the freshest, purest, and most copious deposits of this wonderful fluid, the United States of America alone have it as a source of wealth for ages to come. In it, with it, and about it, are found, either separately or united, all the other bituminous products, and while it can be used for fuel, it can be converted into gas, thus forming a sort of magic circle, giving light and heat all around the periphery of its fantastic transformations. . . . It is something to know that a cargo of petroleum may navigate a river, cross a lake or ocean, in a vessel propelled by steam it has generated, acting upon an engine it lubricates, and directed by an engineer who may grease his hair, anoint his body, perfume his clothing, enrich his food, rub his bruises, freshen his liver, and waterproof his boots, with the same article."

The Early History of the Pennsylvania Petroleum Region—
From the remains of circular, square, and oval pits, sunk in the earth, to a depth of fifteen and twenty feet, cribbed or walled with timber, visible within the memory of persons still living, in many places in the valley of Oil Creek, hundreds in number, and covering an aggregate surface of hundreds of acres, are indicated unmistakably the operations of a race possessing in some degree the elements of modern civilization. From the number of these pits, and their systematic arrangement, petroleum was doubtless obtained in considerable quantities. These pits have been excavated with care, and with reference to one design. Of the date of their excavation, we can only conjecture. Trees of not less age than from two to three centuries were found growing out of these excavations, and there may possibly have been a previous growth. The petroleum had protected the timber against the ravages of time, and their forms still remained, an unsolved problem to modern comprehension. By whom, and in what age of the world's history, these extensive works were executed, is the theme upon which the imagination can find abundant food to speculate, says a writer of the late nineteenth century.

The monuments of a race superior in all respects to those who inhabited this continent when discovered, can be found from the Alleghenies to the Pacific. And stranger still, these vestiges are characterized by progressive degrees of civilization. The ancient mounds of the Ohio, and the remains of ancient cities on the Gila River, amply attest the rate of progress made.

To us, these ancient vestiges would seem to indicate the stages of the migration of successive races from a northern direction, west as far as the Rocky Mountains, which may have formed to them an obstacle too difficult to overcome, and from thence in a southerly course, until the more tropical countries were reached.

In Prescott's "Conquest of Mexico," Vol. I, we find, in relation to the primitive races of Mexico, the following:

"Of these races, the most conspicuous were the Toltecs, advancing from a northerly direction, but from what region it is uncertain. They entered the territory of Anahuac, probably before the close of the seventh century. Of course, little can be gleaned, with certainty, respecting a people whose written records have perished, and who are known to us only through the traditionary legends of the nations that succeeded them. By the general agreement of these, however, the Toltecs were well instructed in agriculture, and many of the most useful mechanic arts; were nice workers of metals; invented the complex arrangement of time adopted by the Aztecs; and, in short, were the true fountains of the civilization which distinguished this part of the continent in later times."

According to the same eminent authority, "the Toltecs, who had extended their sway over the remotest borders of Anahuac, having been greatly reduced by famine, pestilence, and unsuccessful wars, disappeared from the land as silently and mysteriously as they had entered it. Their shadowy history reminds us of those primitive races who preceded the ancient Egyptians in the march of civilization; fragments of whose monuments, as they are seen at this day, incorporated with the buildings of the Egyptians themselves, give to these latter the appearance of almost modern construction. After a lapse of another hundred years, a numerous and rude tribe called the Chicimecs, entered the deserted country from the regions of the far Northwest. They were speedily followed by others of higher civilization, perhaps of the same family with the Toltecs, whose language

they appear to have spoken. The most noted of these were the Aztecs, or Mexicans, and the Acolhuans. The latter, better known in later times by the name of Tezcucans, from the capital, Tezcuco, were peculiarly fitted by their comparatively mild religion and manners, for receiving the tincture of civilization from the few Toltecs that still remained in the country. This, in their turn, they communicated to the barbarous Chicimecs, a large portion of whom became amalgamated with the new settlers as one nation."

From Clavigero, an authority quoted in the same work, the following dates are assigned of the arrivals and departures of the races spoken of. He was a most inquisitive and laborious historian of earlier times, and his testimony, elicited after intelligent research, is worthy of respect. He gives the dates as follows:

The Toltecs Arrived in Anahuac.....	648 A. D.
They Abandoned the Country.....	1051 A. D.
The Chicimecs Arrived	1170 A. D.
The Acolhuans Arrived	1200 A. D.
The Mexicans or Aztecs Reached Tula...	1196 A. D.
They Founded Mexico.....	1325 A. D.

As has been stated by an early writer, the foregoing extracts are made, not for the purpose of proving anything by the strong points of comparison presented; but merely as a curious coincidence.

The country around the Great Lakes may have possibly been the region from which the primitive races spoken of originally came, as well as the source of all the races that had preceded them in their march of emigration, who once peopled the valley of the Mississippi, and even beyond. If the analogy could be established, the building of the monuments left by the mysterious race of "mound-builders," as they are called, and the reasons and explanations therefor, would be clear. With so important a link missing, we are not inclined to make such faint resemblance a basis.

We have beheld, so far as pits sunk in the earth are concerned, ample evidences of operations of a mysterious race, whose occupation of this country antedated the one found by our own, so far that even tradition has failed to give any sign of them. A race possessing intelligence to sink and afterward crib the walls of these primitive oil wells, had certainly arrived at a sufficient state of civilization to utilize it. These uses may have been somewhat similar to those of the present, or not distant past. The artesian wells, so far as we have

been able to learn, were unknown a generation ago in the famous oil region of the Burma Empire. Yet for centuries, a large supply of petroleum had been obtained from their wells, similar in general respects to the pits left in our own locality. In the age in which these pits were sunk, it may have been that the country, from the Alleghenies to the Rocky Mountains teemed with millions of inhabitants. Thousands of towns and cities may have dotted the valley and plain, requiring a commerce co-equal to our own. A petroleum development, similar to our own, may have taken place, and the same eventful scenes have been enacted as occurred during the period following the completion of the famous Drake well. Pits, or wells may have been sunk by the hundreds; "dry holes" may have occurred as now; a revenue may have been realized by the ruling government from its taxation; large cities or towns may have sprung into existence and men may have quickly become rich and some, with reverses, poor again. With traces so plain as the existence of these ancient oil pits, the hope is not futile, that some authentic record of their history will yet be discovered and the wonderful achievements of the race that constructed them, made known.

Petroleum was found, in not only the Pennsylvania oil region, but also in portions of Virginia, Kentucky and Ohio, by the early settlers. It was found in springs of water, coming to the surface of the same in the form of globules, and its presence was not unfrequently manifested on the surface of streams, and occasionally, in fissures of the rocks. It was met with, in the form of gas and in the boring of salt wells, and annoyed the early salt miners greatly, rendering the water from the wells useless for salt, by the impregnation of its offensive odor. It was well known to the Indian tribes, who used it both as a medicine and for toilet purposes, for dressing their wounds, and for mixing their paint. Red paint rock, resembling ochre, is still found in localities on the Allegheny River, which, no doubt, was used by the red men. Its use as a medicine was made known to the first settlers by the Indians, and adopted by them to a great extent. It was used for sprains, cuts, bruises, wounds of all kinds, and sometimes taken internally for various bodily diseases.

Ever since the settlement of this portion of Pennsylvania, hints of its existence have been found on the surface of springs, streams, and from the rocks themselves. Though the quantity gathered was small, the supply was generally equal to the demand, as a few barrels would glut the market. The manner of gathering the oil has been described as follows:

"A point was selected where the oil appeared to bubble up to the surface of the water most freely, when a pit was excavated to the depth of two or three feet. Sometimes this pit was rudely walled up; sometimes not. Sometimes it was near the edge of the water on the bank of the stream, and sometimes in the bed of the stream itself. In these pits the oil and water would collect together, until a stratum of the former would collect upon the surface of the latter, when a coarse blanket or a piece of flannel was thrown in. This blanket or flannel soon became saturated with oil, but rejected the water. The blanket was then taken out, wrung into a tub, and the operation repeated as often as desirable."

The first shipments of petroleum to Pittsburgh are related by Eaton as follows:

"Mr. Carey, one of the first settlers of Oil Creek, possessing, perhaps, a little more enterprise than his neighbors, would collect or purchase a cargo of oil, and proceed to Pittsburgh, and exchange it for commodities needed in his family. This cargo consisted of two five gallon kegs, that were slung, one on each side of a horse, and thus conveyed by land, a distance of seventy or eighty miles. It was a small beginning. . . . At a period later, General Hays, who settled in Franklin in the year 1803, relates, that at one time he purchased the entire product of the region, amounting to sixteen barrels, which he sold in Pittsburgh for about one dollar per gallon."

This was no doubt the first "corner" in the petroleum business and, doubtless, proved more successful than many of those of later date of far greater magnitude.

The same writer says that "a well was bored for the purpose of procuring salt water for the manufacture of that article, at Horse Creek, five miles above Oil City, on the Allegheny River, some forty years since. At the depth of seventy or eighty feet, a strong vein of oil was struck. Disgusted, the miners abandoned the well. Oil was also discovered in Franklin, in a well sunk for household uses, at the depth of thirty feet. An oil well was afterwards drilled through the bottom of this, but no considerable amount of oil was obtained. Its presence was also manifest to the workmen engaged in making the excavations for the lock of the canal at Franklin."

Such, in brief, is the material portion of the early history of the Pennsylvania petroleum product, gathered from available sources.

Early Scientific Research Associated with Petroleum—The following interesting facts are obtained from the report of the United States Commissioners of 1866:

“Rev. John Clayton, at the close of the sixteenth century, discovered coal gas and its utility for illuminating purposes, but no application of the discovery was made until the year 1792, when Mr. Murdock, of Cornwall, in England, commenced a series of experiments, the result of which was so encouraging that Dr. Henry and others became interested in their further prosecution. Gas was at length introduced into some of the manufacturing establishments. In the years 1803 and 1804, the Lyceum Theatre, in London, was lighted with gas, and by the year 1816, it had become quite common in England and France, both of which countries claimed the honor of its discovery. In a few years more its use had extended to all parts of the civilized world.

“This discovery, and the common process of distillation, used for production of gas, and various experiments with different coals, peats, and oils, made in connection therewith, and with different lamps and burners for the more economical use of gas, naturally resulted in the manufacture of hydro-carbon oils from coals and shales, in the art of purifying and refining the oils as now practised, and in the invention of the Kerosene or Petroleum lamp, which has removed the objection to the use of these oils for illuminating purposes.

“These inventions, with the application of the artesian well, by which the existence of extensive subterranean oil deposits have been demonstrated, and the present enormous production brought about, have added greatly to the wealth of the world, and indirectly to the advancement of civilization, by reducing the cost of artificial light. When we reflect that artificial light adds, perhaps, on an average, one-eighth to each day for all the inhabitants of the earth, and when we consider the inestimable value of the time thus gained, not only for the prosecution of industrial pursuits, but for social enjoyment and the cultivation of the mind, we can appreciate the immense utility of these inventions and discoveries, by which is being

brought into general use a better light, unlimited in its supply, and at a greatly reduced cost.

"DeSaussure, of Switzerland, the Chervan Brothers, and Selligue, of France, are the most conspicuous of those who invented, improved, and utilized the processes for producing illuminating oils from coals, peat, shales, and schists. They deserve the credit of having created on the continent of Europe that branch of manufacture, which had become quite large, more than fifteen years ago, and is now of very great importance.

"Mr. James Young, of Bathgate, in Scotland, took out a patent in 1850, now expired, but is continued by letters-patent obtained in the United States, and in force here until 1871. They are understood to be for the destructive distillation of coals, shales, and asphalta from the lowest temperature of decomposition up to a dull red heat, for the production of paraffine oil, or oils containing paraffine.

"The first lamps, so indispensable for burning of petroleum, it is stated, were brought from Vienna, in Austria. They were preceded by American inventions, on the same principle, but less perfect.

"Soon after Mr. Young had perfected his invention the manufacture of artificial oils from different minerals, but principally Cannel coal, by process of destructive distillation, was commenced in the United States. This oil was refined and deodorized, and proved to be a valuable illuminator. Cannel coal is found in large quantity in Beaver and other counties in Western Pennsylvania, in Kentucky, and other states. It is rich in oil, producing forty gallons to the ton. The process was carried on by placing the coal in large iron retorts, inclined at a slight angle to the horizon, and applying heat. About the year 1858, the business began to assume a large and growing importance, and large amounts of Cannel coal lands were bought up by capitalists. Inquiry and investigations, as well as utilization had previously ensued. The natural oil that had for long ages been percolating through fissures of the rocks, and making its presence known in the waters of springs and streams, began to attract the attention of scientific and practical men. Analyzation and experiments indicated the

same illuminating qualities, only in a higher degree, than that of any of the previous substances."

Several parties claim the honor of originating the Venango petroleum development, or, in other words, the drilling of the first well, and pumping of the hidden treasure from the lower depths of earth. We have no data whereby the illustrious discoverer can be known, but the development of the product, and its application to uses of general utility, was reserved for a late date. Disclaiming all intention of interference with the claims of others, we give the following facts as a matter of history. We claim that the honor of originating the petroleum development of Venango County, to which, too, the world owes its early source of light, clearly belongs to George H. Bissell, formerly of the firm of Eveleth & Bissell.

In the year 1853, Mr. Bissell, who was then a resident of New Orleans, acting under the advice of his physician, took up his residence in the North, his health having become impaired by a long residence in a tropical climate. In the summer of that year he paid a visit to Hanover, New Hampshire, the site of Dartmouth College, where Mr. Bissell graduated in 1845. One evening Professor Dixie Crosby, of Dartmouth College, exhibited to him a bottle of crude petroleum, which he inferred, was gathered on the lands of his nephew, Dr. F. B. Brewer, on Oil Creek, near Titusville, Pennsylvania. Being well acquainted with Dr. Brewer, and becoming interested in the product, Mr. Bissell wrote to him and obtained all the information in regard to the locality, and the product itself, of which he was possessed. Some time after, he sent a young man to Titusville to obtain further information, and as his report was favorable, he determined to examine into the matter more fully. About this time he met Mr. Eveleth, whom he had formerly known in New Orleans, and stated to him what he had heard. Mr. Eveleth signified a desire to join Mr. Bissell in examining into the matter.

Messrs. Eveleth and Bissell went on to Titusville in 1854, and while there purchased of Brewer, Watson & Company the territory where the principal oil wells were found, and obtained from Brewer, Watson & Company, a lease for ninety-nine years, for oil purposes, all their boring land in Venango County, free of royalty, paying them therefor the sum of \$5,000, this being the first purchase of land, for oil purposes, made in Venango County. They hired a man named Angier to trench the lands and pump the surface oil and water into vats. The pumping was effected by an apparatus attached to the

working gear of a sawmill. The first three barrels raised were taken to New Haven, Connecticut, and Professor B. Silliman, Jr., employed to analyze the same. In the fall of 1855, Messrs. Eveleth and Bissell published Professor Silliman's very complete report, the total expense of the same being borne by these two gentlemen. The report attracted attention in New Haven, and finally, some capitalists there purchased of Eveleth and Bissell one-third in the property, Eveleth and Bissell retaining two-thirds of the stock, and the whole was placed in a company called the Pennsylvania Rock Oil Company, of which Professor Silliman was elected president. The work of trenching went on with indifferent success, until in 1857, when some members of the company agreed to sink an artesian well, and pay the company twelve cents a gallon, for forty-five years, on all oil raised. They employed a gentleman, named Drake, then a conductor on the New Haven Railway, to superintend the work. Mr. Drake owned one forty-eighth part of the stock of the company. After a delay of over a year, and on the twenty-eighth day of August, 1859, the first vein of oil was struck, at a depth of sixty-nine and one-half feet, which produced for a time four hundred gallons per day. From this source the entire development of petroleum dates and takes its origin.

The report submitted to Eveleth and Bissell by Professor Silliman was most complete, indicating the most thorough and careful scientific study of the subject, and too extended and technical for reproduction here. However, the preamble and the conclusion thereof are quoted as follows:

"I herewith offer you the results of my somewhat extended researches upon the Rock Oil, or Petroleum, from Venango County, Pa., which you have requested me to examine with reference to its value for economical purposes.

"Numerous localities, well known in different parts of the world, furnish an oily fluid, exuding from the surface of the earth, sometimes alone in 'tar springs,' as they are called in the Western United States, while frequently it is found floating upon the surface of water in a thin film, with rainbow colors, or in dark globules, that may, by mechanical means, be separated from the fluid on which it swims.

"In some places, wells are sunk for the purpose of accumulating the product in a situation convenient for collection by pumping the water out. The oil exudes, on the shores of lakes and lagoons, or rises from springs beneath the beds of rivers.

Such are the springs of the Baku, in Persia, and the wells of Amiano, in the duchy of Parma, in Italy. The usual geological position of the rocks furnishing this natural product, is in the coal measures, but it is by no means confined to this group of rocks, since it has been found in deposits much more recent, and also in those that are older; but in whatever deposits it may occur, it is uniformly regarded as a product of vegetable decomposition. Whether this decomposition has been effected by fermentation only, or by the aid of an elevated temperature, and distilled by heated vapor, is perhaps hardly settled.

"It is interesting, however, to remember in this connection, that the distillation, at an elevated temperature, of certain black bituminous shales in England and France, has furnished large quantities of an oil having many points of resemblance with naphtha, the name given to this colorless oil, which is the usual product of distilling Petroleum. The very high boiling point of most of the products of the distillation of the Rock Oil from Venango County, would seem to indicate that it was a pyrogenic (fire produced) product.

"Bitumen, asphaltum, mineral pitch, chapapote, etc., are names variously given to the more or less hard, black, resinous substance, which is produced usually from the exposure of Petroleum. The most remarkable examples of the occurrence of these substances so intimately connected with the history of Rock Oil, are the Lake Asphaltites, or the Dead Sea, so memorable in history, the well-known bitumen lake in Trinidad, and the deposits of mineral pitch or chapapote in Cuba. In one of the provinces of India, vast quantities of Petroleum are annually produced, the chief consumption being local, for fuel and light, but a portion is also exported to Europe for the production of naphtha. In the United States, many points on the Ohio and its tributaries, are noted as producing this oil; nearly all of them within the coal measures. A detailed history of these various localities can be found recorded in books of science, and their repetition here would be out of place.

"The crude oil, as is gathered on your lands, has a dark-brown color, which, by reflected light, is greenish or bluish. It is thick even in warm weather, about as thick as thin molasses. In very cold weather it is somewhat more stiff, but can always be poured from a bottle even at 15° below zero. Its odor is

strong and peculiar, and recalls to those who are familiar with it, the smell of bitumen and naphtha. Exposed for a long time to the air, it does not thicken or form a skin on its surface, and in no sense, can it be called a drying oil. The density of the crude oil is 882, water being 1,000. It boils only at a very high temperature, and yet it begins to give off a vapor at a temperature not greatly above that of boiling water. It takes fire with some difficulty, and burns with an abundant smoky flame. It stains paper with the appearance of ordinary fat oils, and feels smooth and greasy between the fingers. It is frequently used in its crude state to lubricate coarse machinery. In chemical characters, it is entirely unlike the fat oils. Most of these characters are common to Petroleum from various places. In one important respect, however, the product of your lands differ from that obtained in other situations, that is, it does not, by continued exposure to the air, become hard and resinous like mineral pitch or bitumen. I have been informed by those who have visited the locality, that on the surface of the earth about the springs, which furnish your oil, there is no crust or deposit of this sort, such as I have seen in other situations where Petroleum or mineral tar is flowing. This difference will be seen to be of considerable importance, as it is understood and represented that this product exists in great abundance upon your property, that it can be gathered wherever a well is sunk in the soil, over a great number of acres, and that it is unfailing in its yield from year to year. The question naturally arises, of what value is it in the arts, and for what uses can it be employed? To enable you to answer these inquiries, has been the object of my researches.

"To determine what products might be obtained in the oil, a portion of it was submitted to fractional distillation. The temperature of the fluid was constantly regulated by a thermometer, the heat being applied first by water bath, and then by a bath of linseed oil. This experiment was founded upon the belief that the crude product contained several distinct oils, having different boiling points."

From this point Professor Silliman's report is a very exhaustive and technical résumé of the results obtained from his elaborate laboratory research and his conclusions formed from the study of these

results. By the fractional distillation method, he obtained eight products at various temperatures and with reference to these he says:

"We infer from them that the Rock Oil is a mixture of numerous compounds, all having essentially the same chemical constitution, but differing in density and boiling points, and capable of separation from each other, by a well-regulated heat."

He also stated:

"The uncertainty of the boiling points indicates that the products obtained at the temperatures named were still mixtures of others, and the question forces itself upon us, whether these several oils are to be regarded as *educts* (*i. e.*, bodies previously existing, and simply separated in the process of distillation), or whether they are not rather produced by the heat and chemical change in the process of distillation. The continued application of an elevated temperature alone is sufficient to effect changes in the constitution of many organic products, evolving new bodies not before existing in the original substance."

Relative to the properties of the distilled oils, he said:

"Exposed to the severest cold of the past winter, all the oils obtained in this distillation remained fluid. Only the last two or three appeared at all stiffened by a cold of 15° below zero, while the first three or four products of distillation retained a perfect degree of fluidity. Exposed to air, as I have said, they suffer no change. The chemical examination of these oils showed that they were all composed of hydrogen and carbon, and probably have these elements in the same numerical relation. When first distilled they all had an acid reaction, due to the presence of a small quantity of sulphuric acid, derived from the crude oil. This was entirely removed by a weak alkaline water, and even by boiling on pure water. Clean copper remained untarnished by the oil which had thus been prepared, showing its fitness for lubrication, so far as absence of corrosive quality is concerned. The oils contain no oxygen, as is clearly shown by the fact that clean potassium remains bright in them. Strong sulphuric acid decomposes and destroys the oil entirely. Nitric acid changes it to a yellow, oily fluid, similar to the changes produced by nitric acid on other oils. Hydro-

chloric, acetic acids do not affect it. Litharge and other metallic oxides do not change it, nor convert it in any degree to a drying oil. Potassium remains in it unaffected, even at a high temperature. Hydrates of potash, soda, and lime, are also without action upon it. Chloride of calcium and many other salts manifest an equal indifference to it. Distilled with bleaching powders (chloride of lime), and water, in the manner of producing chloroform, the oil is changed into a product having an odor and taste resembling chloroform. Exposed for many days in an open vessel, at a regulated heat below 212° , the oil gradually rises in vapors, as may be seen by its staining the paper used to cover the vessel from dust, and also by its sensible diminution. Six or eight fluid ounces, exposed in this manner, in a metallic vessel for six weeks or more, the heat never exceeding 200° , gradually and slowly diminished, grew yellow, and finally left a small residue of dark-brown lustrous looking resin, or pitchy substance, which in the cold was hard and brittle. The samples of oil employed were very nearly colorless. This is remarkable when we remember that the temperature of the distillation was above 500° Fah. The oil is nearly insoluble in pure alcohol, not more than 4 or 5 per centum being dissolved by this agent. In ether the oil dissolves completely, and on gentle heating is left unchanged by the evaporation of the ether. India rubber is dissolved by the distilled oil to a pasty mass, forming a thick, black fluid, which, after a short time, deposits the india rubber. It dissolves a little amber, but only sufficient to color the oil red. It also dissolves a small portion of copal in its natural state; but after roasting, the copal dissolves in it as it does in other oils.

"The crude oil was tried as a means of illumination. For this purpose a weighed quantity was decomposed, by passing it through a wrought-iron retort filled with carbon, and ignited to full redness. The products of this decomposition were received in a suitable apparatus. It produced nearly pure carburetted hydrogen gas, the most highly illuminating of all the carbon gases. In fact the oil may be regarded as chemically identical with illuminating gas in a liquid form. The gas produced equalled ten cubic feet to the pound of oil. It burned with an intense flame, smoking in the ordinary gas jet, but furnishing the most perfect flame with the argand burner. These experi-

ments were not prosecuted further, because it was assumed that other products, now known and in use, for gas making, might be employed at less expense for this purpose, than your oil. Nevertheless, this branch of inquiry may be worthy of further attention.

"The results of the distillation at a regulated temperature in glass, led us to believe, that in a metallic vessel capable of enduring a high degree of heat, we might obtain a much larger proportion of valuable products. A copper still, holding five or six gallons, was therefore provided, and furnished with an opening, through which a thermometer could be introduced into the interior of the vessel. . . . The result of this graduated distillation, at a high temperature, is that we have obtained over 90 per cent of the whole crude product in a series of oils, having valuable properties, although not all equally fitted for illumination and lubrication. It is safe to add that, by the original distillation, about 50 per cent of the crude oil is obtained in a state fit for use as an illuminator without further preparation than simply clarification by boiling a short time with fair water."

Referring to the last product obtained by distillation at a high temperature, Professor Silliman states that it came off slowly, at about 750° Fah., and was thicker and darker than the original oil, and when cold was filled with a dense mass of pearly crystals; that these were paraffine, a peculiar product of the destructive distillation of many bodies in the organic kingdom. He stated that this substance could be separated, and obtained as a white body, resembling fine spermaceti, and from it beautiful candles had been made. On this subject he said:

"I am not prepared to say, without further investigation, that it would be desirable for the company to manufacture this product in a pure state, fit for producing candles (a somewhat elaborate chemical process), but I may add, that should it be desirable to do so, the quantity of this substance produced may probably be very largely increased, by means which it is now unnecessary to mention."

This very interesting and exhaustive report closes with the following paragraph:

"In conclusion, gentlemen, it appears to me that there is much ground for encouragement in the belief that your Com-

pany have in their possession a raw material from which, by simple and not expensive process, they may manufacture very valuable products. It is worthy of note, that my experiments prove that nearly the whole of the raw product may be manufactured without waste, and this solely by a well directed process, which is in practice one of the most simple of all chemical processes. There are suggestions of a practical nature, as to the economy of the manufacture, when you are ready to begin operations, which I shall be happy to make, should the Company require it—meanwhile I remain, gentlemen, Your obedient servant, B. Silliman, Jr., Professor of Chemistry in Yale College, New Haven, April 16, 1855."

Although the report of Professor Silliman indicates that he recognized in petroleum a valuable natural resource and the possibility of developing therefrom numerous useful products, it is unlikely that he entertained even a remote idea of the vast proportions the petroleum industry was destined to assume; the ultimate enormous production of the crude product throughout the world; the vast number of valuable by-products destined to be derived therefrom by the ingenuity of man, useful in practically every industry and art, in medicine, food, transportation, chemistry, domestic and esthetic purposes, ranging all the way from road and fuel oils to perfumes and cosmetics for the fair sex. Relative to his statement that he was not prepared to say, without further investigation, that it would be desirable to manufacture paraffine in a pure state, the production of candles made from paraffine later assumed huge proportions and paraffine is now produced in great quantities and is used for many purposes.

We learn from the records of early authorities that the wells in Burma in their time were, at the greatest, two hundred feet in depth; today wells are drilled as deep as two to four thousand feet and have been drilled considerably deeper; this depending upon the different sand strata. In the interesting report of John Crawford, referred to previously, he states that the whole number of persons engaged on each well were *only* four; today, with the modern method of connecting wells, a single man supervising an oil lease, with the power obtained from an internal combustion engine may pump thirty to forty, or even a greater number of wells, this depending upon the power of the engine, the depth of the wells and the relative position of the wells to each other. The progress of man in material matters, at least, during the last century is indicated in the changed methods of

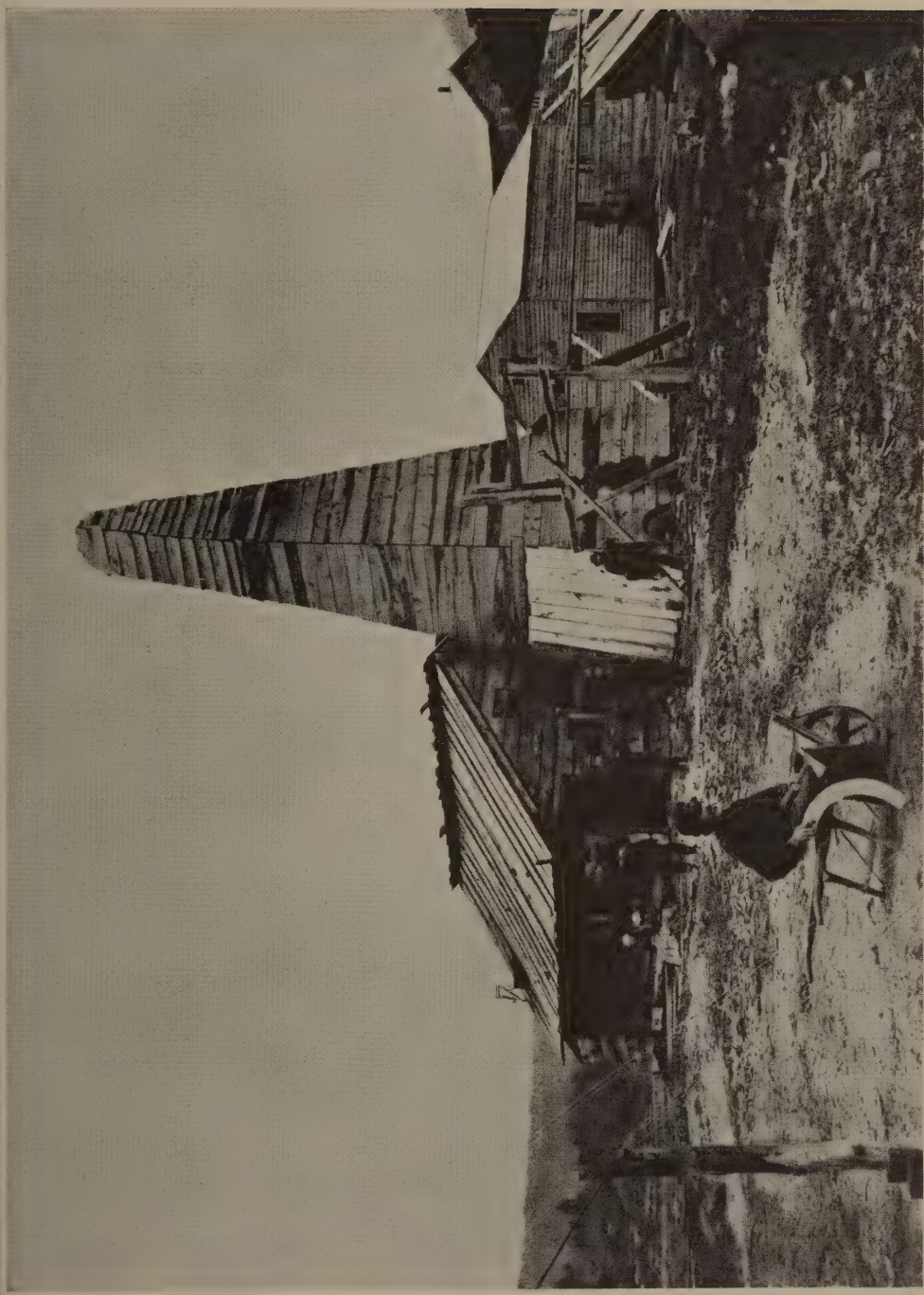
transportation. We have noted how petroleum was transported in earthen pots placed on carts in Burma and thence by water a century ago. Now it is carried in long trains of tank cars by rail; in great ocean going tank ships and by pipe lines extending clear across the continent.

Perhaps no other product has so greatly influenced and changed the customs and the activities of man, making possible today many of the advantages he most cherishes. It has had its influence upon practically everything associated with human life and progress. It is used by man for both constructive and destructive purposes and has been responsible for the modern methods of warfare, as the result of which, at this time, thousands of human lives are being sacrificed in the mad struggle by contending forces to obtain possession of large producing areas of the product which is so necessary in present war activities. It is unfortunate that foolish, avaricious and brutal man, ignoring his responsibilities to God and to his fellow creatures, fails to use God's gifts to man for the greater honor and glory of God and the welfare of man.

A NUISANCE BECOMES RECOGNIZED AS A PRODUCT OF VALUE

For many years before Colonel Edwin L. Drake drilled his famous well in Venango County, near Titusville, in 1859, people living in northwestern Pennsylvania were familiar with petroleum and made use of it. As white settlers moved into the region and located along Oil Creek, which ran between what is now Titusville and Oil City, they began collecting petroleum from little springs either in the bank or in the actual bed of the stream; or, making an excavation in the low marshy ground, which immediately filled with water and oil, they skimmed off the oil. Whenever they found a spring in the bed of Oil Creek, they constructed a dam of loose stones a little higher than the surface of the water, ten to fifteen feet in diameter, around the place where the oil bubbled up. An eddy was thus created inside the wall which confined the floating oil, while the water flowed out freely between the loose stones. The oil was allowed to accumulate for several days, until it became an inch or more deep, when a piece of flannel or woolen cloth or a blanket was spread over the surface to absorb the oil; then it was wrung out by hand into a barrel or some other container. In this way a gallon and sometimes several gallons could be collected in a day. The output of most of the springs, however, was not sufficient to warrant collecting it as a business.

The spring which yielded the greatest amount of oil and to which most of the eighteenth and early nineteenth century observers refer



The First Drake Well, Near Titusville, Its Drillers and Its Complete Rig

was located in the middle of Oil Creek on the Hamilton McClintock farm about three miles above what is now Oil City. From it twenty to thirty barrels of pure oil could be obtained in a season.

The inhabitants valued and used it exclusively as medicine. They found it beneficial and, according to an early authority, "an infallible cure for headaches, toothache, bruises, sore breasts, rheumatism, lung diseases, constipation, cuts, burns, and all human ailments." Almost every family in the region kept a small supply of Seneca oil, as it was called, for emergencies; for ordinary purposes a pint bottle would last a year.

Nathaniel Carey, one of the first settlers on Oil Creek, often collected or purchased oil and peddled it about the country. Carey is said to have introduced petroleum into Pittsburgh, seventy or eighty miles distant, about 1790. His shipment consisted of two five-gallon kegs that were slung on each side of a horse. In exchange for oil, he secured the necessary provisions for his family. Later, raftsmen would bring a barrel or two down the Allegheny on a raft of lumber or logs; but the introduction of so much oil at one time literally flooded the market. A traveler in 1807 found that petroleum was selling at \$1.50 and \$2.00 a gallon in the Pittsburgh market.

Some time ago the Historical Society of Western Pennsylvania acquired an interesting and important sketch of a scene on Oil Creek in 1810; the drawing is by J. Frank Waldo. In the background there is a log cabin and over to the left are some Indian huts. In the foreground there is a log raft on which are three hollowed-out logs and into these a Mr. Roy and his friend are pouring oil gathered from a nearby oil spring along Oil Creek; they are preparing to take it to Pittsburgh for sale. It is a valuable piece of evidence in the history of the early traffic in petroleum to Pittsburgh. Quite a striking contrast to the methods of transportation and the quantities of petroleum being moved throughout the whole world today.

In 1828 enough was known about petroleum to cause someone to advocate in a Pittsburgh newspaper that the city light the streets with it; the writer pointed out that the price was low; it could be collected with scarcely any labor; and it was running to waste on Oil Creek. However, nothing came from the suggestion and Pittsburgh continued to regard petroleum as an ointment.

Petroleum was first placed on the market as an illuminating material through the efforts of Samuel Kier, of Pittsburgh. For years the salt wells of his father near Tarentum, on the Allegheny River about twenty miles above Pittsburgh, had yielded a small amount of petro-

leum. About 1846, however, his father drilled a salt well in which oil appeared in a greater quantity. Lewis Peterson, Jr., who managed his father's wells near the Kier wells, experienced the same trouble. In fact, more oil came from Peterson's wells than from Kier's. It was an unwelcome substance, a source of great annoyance, and it is said that Peterson offered a reward to anyone who could utilize it. Without any knowledge as to how it might be used, they allowed it to run off either into the old Pennsylvania Canal or onto the ground. One of the many instances when one was close to fame and fortune and did not realize it.

One day Peterson took a sample of the oil to the Hope Cotton Factory in Pittsburgh and, by experimentation, the proprietor found it to be a better and cheaper lubricant for the finest cotton spindles than the best sperm oil. As a result, Peterson agreed to furnish two barrels a week, and for the next few years the factory used the oil, unknown to anyone save the proprietor.

About 1849 Samuel Kier conceived the idea of bottling and selling oil from his father's wells as medicine. According to the story, his wife had been ill with consumption and her physician prescribed "American Oil," which seemed to help her. Kier compared it with the oil obtained from his father's salt wells and, inasmuch as they possessed the same odor, he concluded that they were identical. This experience and a knowledge of its long usage in western Pennsylvania led Kier to open an establishment in Pittsburgh where the oil was put up in half-pint bottles and wrapped in a descriptive circular telling of the wonderful curative properties of "Kier's Petroleum, or Rock Oil." Through agents, who traveled over the country, it was offered to the public. Despite the low price, Kier could not dispose of the two or three barrels produced by the wells; so he withdrew the salesmen and sold the oil through druggists. With a decline in sales and a supply of oil which exceeded the demand, Kier concluded that something leading toward a more general utilization of the oil must be done.

Having burned the crude oil at the Tarentum wells, Kier believed he might use the surplus if only some method could be found to eliminate the smoke and odor. He sent a man to England to learn the method of refining coal oil, but his agent returned empty-handed, for the British had covered up their operations so well that no idea of the process could be obtained. Samples of the oil were then submitted to J. C. Booth, a prominent chemist in Philadelphia, who, after an analysis, recommended that Kier offer the oil to a New York gutta-

percha firm, which was seeking a proper solvent for this gum. Kier followed the advice, but the experiments proved unsatisfactory. Upon further reflection, Booth became convinced that by distilling the oil he could obtain an excellent illuminant. He furnished drawings, and Kier immediately erected a refinery containing a one-barrel still on Seventh Avenue above Grant Street in Pittsburgh. After much experimentation Kier devised a crude distillation process, and about 1850 he began to distill petroleum, becoming America's pioneer oil refiner and industrialist. He named the new product "carbon oil," and sold it for \$1.50 a gallon.

Without a suitable lamp in which to burn carbon oil, Kier is reported to have offered \$1,000 for a new one that would successfully burn his illuminant; but none appeared. He, therefore, made some slight changes in the existing camphine lamps, so that they would burn his product without smoking and give off a strong and brilliant light. Since it was better and cheaper than existing illuminants, carbon oil came into general use in many places in western Pennsylvania, and Kier had to install a five-barrel still in order to supply the demand.

Afraid of explosion and fire, residents in the vicinity of the refinery complained to the authorities, and the city council gave Kier notice to move his refinery outside the city. Moving to Lawrenceville, a suburb of Pittsburgh, Kier continued his improvements in the quality of the oil and in the adaptability of the lamps. Subsequently he perfected but did not patent a four-pronged burner to fit any lamp, and it produced a steady flame with his oil; but the disagreeable odor still remained.

One day in 1857, A. C. Ferris, a New York business man, while visiting the drug store of Nevin, MacKeown & Company in Pittsburgh, saw in the basement a tin lamp burning carbon oil, which the firm of MacKeown & Finley had been distilling on a small scale from the Tarentum wells. Impressed by its possibilities, Ferris arranged to have MacKeown & Finley supply him with about two thousand barrels of oil a year. His attention having been called to the fact that Kier distilled petroleum, Ferris also purchased and received a shipment from him in March, 1858. Upon testing it, Ferris wrote that "it is not as good and saleable a color as MacKeown & Finley's, being a deep blue," Furthermore, it had a very obnoxious odor. "In almost every instance where we have sold it," Ferris wrote Kier, "we have had a complaint of it, and a good deal of it returned upon our hands with expenses." In order to improve the smell, Ferris advised Kier to run his hot oil into a cistern, allow it to cool, and expose it to the

air. Ferris bought one hundred additional barrels from Kier during the spring, but the oil continued to be so unsatisfactory that no further purchases were made.

Ferris proceeded, with considerable effort and much expense, to experiment; he devised a lamp that would satisfactorily burn carbon oil; he refined the oil and improved its quality; he developed the market in New York; and soon this improved quality of illuminating oil from petroleum outran the sources of supply. The price jumped from seventy-five cents a gallon to \$1.50 and then to \$2.00, a price so high that it furnished an incentive to find petroleum, if possible, in greater quantities. Charles Lockhart, of Pittsburgh, and a friend in Tarentum formed a partnership in 1853, bought a salt well across the river from Tarentum that was producing petroleum, and sold the oil to Kier. Lewis Peterson, Jr., likewise concluded that he would improve the opportunity for getting oil. He and a friend decided to buy a salt well on the Humes farm not far from the Peterson's property. The entire product from this well was sent to Baltimore for use at the carding mills. The income from this well of Peterson and his friend for 1858 was said to be about \$10,000. All efforts to increase the supply of petroleum, however, met with indifferent success until Colonel Drake drilled his famous well near Titusville in 1859.

A Sketch of Colonel Edwin L. Drake—Edwin Laurentine Drake, who drilled the first commercial oil well and thus was the founder of an industry destined to represent billions of invested capital, was born March 29, 1819, on a farm near Greenville, New York. He died in Bethlehem, Pennsylvania, November 8, 1880, in poverty, a pensioner of the State.

Edwin and a brother were the only children and while they were young boys the family moved to Castleton, Vermont. After receiving a district school education and working about the farm until he was nineteen, Edwin started for Michigan, where an uncle resided, intending to find work there. He had reached Buffalo, New York, on his way West, when he got a job as night clerk on a steamboat running between that city and Detroit, Michigan. With the close of lake navigation for the season he left the boat at Detroit and went to his uncle's home near Ann Arbor. Obtaining work on a farm, he remained for a year. This was followed by two years as a hotel clerk in Tecumseh, Michigan.

Going back to Vermont to visit his parents, Edwin was prevailed upon to remain in the East. He obtained employment as a sales-

man in a dry goods store in New Haven, Connecticut. At the end of three years he gave up this job and went to New York, where he found work as a salesman in a Broadway dry goods store. He married a young woman from Springfield, Massachusetts, and becoming ill soon afterward he gave up his position. With his wife he went to Springfield, where rest restored his health. Offered a position as express agent on the Boston & Albany Railroad at a salary of \$50 a month, he accepted it, continuing in this work until 1849, when he quit to become a conductor on the New York & New Haven Railroad, just completed at that time. He retained this railroad job until 1857, in which year he became associated with a group of men interested in a project for the recovery of surface petroleum on land near Titusville, Pennsylvania, by digging a system of trenches. These men had organized the Pennsylvania Rock Oil Company.

Mrs. Drake died in 1854. This broke up the little home in New Haven and young Drake began boarding. While residing in the Tontine Hotel in New Haven he met James M. Townsend, a New Haven banker and president of the Pennsylvania Rock Oil Company. Things were not going well with the company. Mr. Townsend persuaded the young railroad conductor to invest his bank balance of \$200 in Pennsylvania Rock Oil stock, thereby disposing of some of the five hundred shares which he himself held. Shortly afterward Mr. Townsend engaged Mr. Drake to go to Titusville and investigate the oil prospects there. Mr. Drake's report was enthusiastic and the drilling venture on Watson Flats was the outcome.

Before Mr. Drake had arrived at Titusville, mail was awaiting him there addressed to "Col. E. L. Drake." This had been sent by Mr. Townsend, who appreciated the advertising value of a military title and the gratuitous title of "colonel" stuck to Mr. Drake throughout his life.

Three years after the death of his wife, Colonel Drake married Laura Dow, of New Haven. In the spring of 1858 Colonel Drake and Mrs. Drake, with their two children, one by the first wife, arrived in Titusville, Colonel Drake having been engaged by the Seneca Oil Company, operating subsidiary of the Pennsylvania Rock Oil Company, to supervise operations for the recovery of petroleum. He was provided with \$1,000 to start with and his contract called for \$1,000 a year salary. Days of adversity and of financial difficulty followed.

When, in May, 1859, the people of Titusville saw a derrick erected and the newcomer from New England directing the drilling of a hole through the rock with the idea of reaching oil they ridiculed him and

called the enterprise "Drake's Folly." However, Colonel Drake was unmoved. His money became exhausted and the men in the East to whom he had looked for financial support were slow to send more. A few men in Titusville who believed in him and in his theory advanced sufficient to avoid abandoning the undertaking.

Colonel Drake's faith was vindicated in August, 1859, when he struck oil, bringing to a triumphant conclusion an experiment destined to revolutionize man's way of living and doing things; which was to cause towering derricks to be erected on farms, in woods and on sandy desert; which was to build cities and dot the seas with ships; which was to create great fortunes and set the spirit of adventure again aflame. The countryside was electrified by the news of the Drake well; but while other men scrambled to gain such advantages as they might by forehandedness, Colonel Drake himself, failing to realize the great importance of his discovery, made no move.

Colonel Drake, who might easily have acquired a fortune, extended his actual participation in oil drilling little beyond the discovery well. In 1860 he was elected a justice of the peace in Titusville. The income from this office was about \$3,000 a year, since there was great activity in the buying and selling of oil leases and oil lands and he drew up and signed most of the conveyances. At the same time he bought oil for a New York firm and the commissions on this business increased his earnings to about \$5,000 a year. He purchased twenty-five acres of ground from Jonathan Watson, and Drake Street, Titusville, a residential thoroughfare, named after him, traverses the middle of this tract. There was a mortgage on the property and Colonel Drake later was compelled to sell it. Records indicate he made no profit out of this venture in real estate.

In 1863, Colonel Drake left the oil country, never to return to it. He is estimated to have had about \$15,000 with which he purchased a partnership in a Wall Street firm in New York dealing in oil shares. Unfortunate speculation soon wiped out his savings.

Left without a cent and suffering from a breakdown which threatened to be fatal, Colonel Drake, with his wife and four children went back to the old home in Vermont, the expenses of the trip being met with money which Mrs. Drake had managed to earn and save. A neuralgic affection of the spine settled upon him. Mrs. Drake bravely assumed the task of caring for the invalid and of maintaining the family by sewing. A physician having advised the sick man to go where he would have the benefit of sea air, a friend of the family offered the use of a cottage near Atlantic Highlands, New Jersey. The offer was

accepted, but in the new home Mrs. Drake encountered great difficulty in providing sufficient food for the family. Later the family moved to the nearby village of Chapel Hill.

In desperation Colonel Drake dragged himself to New York, "hoping to be able to find a position for his oldest boy among the friends he had known in the days of his comparative prosperity." In the street there he met "Zeb" Martin, of Titusville, who noting the poor man's run-down appearance, drew from him the story of his misery. The man who had opened the way for hundreds of others to gain riches admitted that he was hungry and destitute. Mr. Martin bought him a dinner, gave him \$20 and assured him that help soon would be forthcoming from old friends in the oil regions. On his return to Titusville, Mr. Martin called a public meeting in Corinthian Hall and there told of Colonel Drake's plight. In a short time a relief fund of \$4,200 was raised. This money was placed in the hands of Mrs. Drake, who had proved herself a wise and frugal manager. The interest (she kept the principal intact so far as possible) lightened the load on her shoulders.

Help for the stricken family did not stop with private contributions. The Drakes moved to Bethlehem, Pennsylvania, early in the seventies and the Pennsylvania Legislature passed an Act granting an annuity of \$1,500, which was paid to Colonel Drake until his death and then to Mrs. Drake throughout the rest of her life. This removed the more serious of their financial worries. The annuity was authorized in recognition of the fact that the Drake discovery had "greatly stimulated various industries" and "added directly to the revenues of the commonwealth."

Death probably robbed Colonel Drake of a congressional appropriation of a quarter million dollars in appreciation of his epochal achievement. The story was told as follows by the "Petroleum Monthly":

"A short time before the death of that eminent statesman, Thad. Stevens, he in conversation with a friend, was discussing the magnificent extent of the petroleum trade in the United States when Mr. Stevens abruptly asked, 'What has become of Mr. Drake, the fellow who discovered this oil? I have heard he made a great fortune out of it.' His friend replied, 'I have had the honor of an intimate acquaintance with Colonel Drake and am sorry to say that, far from making a fortune out of his search for oil, he lost not only his money but his health also.'

Mr. Stevens became at once deeply interested in the matter, and asked for a history of the colonel and the facts connected with his labors on Oil Creek before his final success. When it transpired that the colonel was living in obscurity and want the indignation of the old man was violent. 'What,' he said, 'can it be possible that this man is allowed to want for anything—this man who has done more for our state than any other since the days of Penn? This is the most damnable ingratitude I ever heard of.'

"His companion remarked that the oil men of Pennsylvania should take care of Mr. Drake.

"'No sir,' said Mr. Stevens. 'They have no right to take care of Colonel Drake. They risk their money and deserve their riches if they gain any. The State, sir, should take care of the man, and good care, sir, too—good care, sir. If I were in the Pennsylvania legislature I would never rest until they had given him a sum in keeping with the wealth and dignity of the commonwealth, and if justice can be done he will get it.'"

Shortly afterward, August 11, 1868, Mr. Stevens died. Among his papers was found a bill ready for presentation to Congress, appropriating \$250,000 for the relief of Colonel Drake, who was referred to as "a benefactor of his race." As Mr. Stevens up to the time of his death was the recognized leader of the House of Representatives, it is believed the bill would have been passed.

In Woodlawn Cemetery, Titusville, is a beautiful monument, gift of the late Henry H. Rogers, of the Standard Oil Company, marking the last resting place of Colonel and Mrs. Drake. The body of Colonel Drake, buried first in Bethlehem, Pennsylvania, was moved later to the Woodlawn Cemetery. The monument was unveiled October 4, 1901, with ceremonies in which leading citizens took part.

THE FOUNDING OF ONE OF THE WORLD'S GREATEST AND LARGEST INDUSTRIES

Dr. Paul H. Giddens, professor of history and political science at Allegheny College, Meadville, Pennsylvania, and author of "The Birth of the Oil Industry," refers to Drake's discovery as follows:

"The significance of Drake's discovery was that he had demonstrated in a practical way how petroleum could be secured in greater abundance, and his well served as a textbook

for future drillers; he had tapped vast subterranean deposits of petroleum in the great basin of Oil Creek; and he was responsible for the establishment of a new industry which provided the world with a cheap, safe, and efficient illuminant. Not only that, but on the eve of a mighty industrial expansion, Drake had opened up a source of unexcelled lubricating oil, an item of utmost importance to the Machine Age. Neither Drake or anyone else at the time seemed to understand the importance of this historic event. Even the newspaper editors failed to grasp the significance of what Drake had done. The 'New York Tribune' did not mention the affair until September 13, 1859, and then it simply printed a short communication from a Titusville correspondent. The old 'Crawford Journal' at Meadville, Pennsylvania, was the first newspaper in the oil region to report the strike. Buried away among local items on the inside page, without a caption, the paper carried, on the same day as the 'New York Tribune,' a few lines about the event destined to be of supreme importance to the world. It was not until September 30 that any Pittsburgh newspaper mentioned the strike, and then the 'Pittsburgh Gazette' printed a long letter from Titusville describing the well; about a month later the 'Pittsburgh Post' devoted a few lines to the excitement created by Drake's well."

Within twenty-four hours after Drake struck oil, hundreds of people were milling around the well. An eye witness wrote that the excitement in the succeeding days was fully equal to what he had seen in California at the time of the gold rush; everyone was wild to lease or buy land at any price and drill a well.

In the midst of all the excitement Drake made strenuous efforts to market his rich supply of oil. He immediately got in touch with S. M. Kier and W. MacKeown and started shipping them oil in September, 1859. A month later, Drake contracted with Kier to supply him with such quantities as he desired at sixty cents a gallon delivered in Pittsburgh. Kier promised to sell the oil in preference to any other that should come onto the market, but in case any other appeared in such quantities as to depreciate the value of Drake's, the price paid by Kier was to be reduced. Under this arrangement, Drake shipped Kier almost \$3,500 worth of oil from September, 1859, to January 1, 1860, and for the same period he shipped over \$5,000 worth to MacKeown, with whom he had made similar arrangements.

In order to introduce his product and solicit other orders, Drake made a trip in February, 1860, to Erie, Chicago, Cincinnati, and Pittsburgh; but he found petroleum difficult to sell. While in Pittsburgh at the Scott House, Drake happened to meet George M. Mowbray, a chemist associated with Schieffelin Brothers & Company, of New York. The meeting was fortunate, for Drake wanted to get his product on the market and Mowbray knew the value of petroleum. Once these two men had been introduced, they started a parley that did not break up until four o'clock in the morning. As a result of the two men's consuming almost an entire box of choice Havanas during their conversation, they made an agreement for the marketing of oil. In connection with this effort to create a market for oil, it is important to point out that Charles Lockhart, of Pittsburgh, carrying samples of crude and refined oil, went abroad in May, 1860, and was the first to call the attention of Europeans to the value of petroleum.

In the meantime, salt manufacturers from Tarentum and capitalists from Pittsburgh had arrived in the oil region and, like hundreds of others, were eager to invest in land and drill wells. One of the most important transactions in 1859 was the purchase of the Story farm, a few miles above Oil City, by a group of Pittsburghers; the farm, consisting of nearly five hundred acres, sold for \$40,000. The owners, in turn, leased lots to different persons and soon had some producing wells. Discouraged by the low price of oil, they decided to change into a joint stock company and organized the Columbia Oil Company in May, 1861, with a capital of \$200,000, divided into ten thousand shares. Andrew Carnegie was one of the heaviest stockholders, and the subsequent dividends from oil helped him to erect his new steel mills. Persuaded by his good friend, William Coleman, Carnegie accompanied him on a trip to the farm about 1862, and had a "most interesting excursion." The influx of people was so great that it was impossible for them to obtain ordinary shelter, they put up in a shanty and lived comfortably. Of those who came into the oil region, Carnegie said:

"They were men above the average, men who had saved considerable sums and were able to venture something in the search of fortune. What surprised me was the good humor which prevailed everywhere. It was a vast picnic, full of amusing incidents. Everybody was in high glee; fortunes were supposedly within reach; everything was booming. On the

tops of the derricks floated flags on which strange mottoes were displayed. I remember looking down toward the river and seeing two men working their treadles boring for oil upon the banks of the stream, and inscribed upon their flag was 'Hell or China.' They were going down no matter how far. The adaptibility of the American was never better displayed than in this region. Order was soon evolved out of chaos. When we visited the place not long after we were serenaded by a brass band the players of which were made up of the new inhabitants along the creek. It would be safe to wager that a thousand Americans in a new land would organize themselves, establish schools, churches, newspapers, and brass bands—in short, provide themselves with all the appliances of civilization—and go ahead developing their country before an equal number of British would have discovered who among them was the highest in hereditary rank and had the best claims to leadership owing to his grandfather. There is but one rule among Americans—the tools to those who can use them."

While at the farm, Coleman proposed to make a lake of oil by excavating a pool sufficient to hold one hundred thousand barrels, the waste to be made good every day by running streams of oil into it, and to hold it for the not far distant day when, as Coleman and Carnegie fully expected, the oil supply would cease. Coleman predicted that when the supply stopped, oil would bring \$10 a barrel and then they would have \$1,000,000 in the lake reserve. The suggestion was promptly acted upon, and after losing many thousands of barrels of oil waiting for the expected day, the reserve was abandoned owing to the seeming inexhaustibility of Mother Nature's supply of oil.

The Columbia farm was one of the most beautiful and attractive places in the entire oil region. Under the direction of its superintendent, George Bolton, a model community, situated on a hillside, with neat and substantial dwellings for the workmen, had been developed. It was the show place of the oil region.

The development of the petroleum industry not only provided Pittsburgh capitalists with a new outlet, but since Pittsburgh possessed marked advantages over other cities, it became the earliest important distributing and refining center. It had an abundance of labor, chemicals, cheap coal, large banking and credit facilities, and cheap transportation from the oil field by way of Oil Creek and the Alle-

gheny River. Oil could be floated down stream for much less than the cost of freight by rail. It also had a favorable position with respect to the three great markets; refined oil could be shipped over the Pennsylvania Railroad to Philadelphia for the eastern trade; it could be shipped down the Ohio for the western trade; and it could be shipped south by water and rail. For a few years, therefore, Pittsburgh reigned supreme as the center of the oil trade. This was a most fortunate development for the city, for at the outbreak of the Civil War, the gloom of uncertainty disrupted and paralyzed all branches of trade and industry in Pittsburgh; mechanics and laborers were thrown out of work; the iron and glass trade, which gave employment to thousands, languished; and the cotton factories, of vital importance to the city, stopped work. Business stagnation prevailed. And then along came the oil trade, which created new occupational groups, stimulated various branches of industry, and gave employment to all kinds of laborers.

The facilities for shipping oil from Oil Creek prior to 1862 were crude and inadequate, except when the water in Oil Creek was high enough to permit flatboating. High water stages averaged less than six months a year, and during the rest of the time oil had to be hauled to different shipping points. The nearest railroad stations to Titusville and the oil region in 1860 were Corry, Union Mills and Garland, about twenty to twenty-five miles to the north. The Philadelphia & Erie Railroad, now the Pennsylvania, served all of these towns and connected them with the seaboard. The Atlantic & Great Western Railroad, now a part of the Erie system, whose tracks crossed the Philadelphia & Erie at Corry, also provided direct service to the eastern markets. Prior to 1862, about six thousand teams were regularly engaged in hauling oil to these shipping points.

The only alternative to this expensive and slow method of transporting oil was the pond freshet, which lumbermen had used for years to raft logs down Oil Creek when the water was too low to permit navigation. To create the pond freshet there were at least seventeen sawmills with dams on the principal branches of Oil Creek, some of which were as much as ten miles above Titusville. Through a system of floodgates, the water could be held until a sufficient quantity had backed up; then it was let loose, thereby making a stage of water below sufficient to float logs down the creek. After the pond freshet passed, the cuts in the dams were closed, the water collected, and the mills resumed sawing and grinding until the next one. Because it was cheaper and quicker, though fully as hazardous as or more so

than teaming, the oil men appropriated the idea of a pond freshet and usually carried their oil twice a week down the creek to Oil City.

A pond freshet afforded a most unusual sight, for there were from 150 to 200 flatboats, little and big, loaded with 10,000, 20,000 or 30,000 barrels of oil, either barreled or in bulk, floating along endways and sideways on a rushing flood and wildly fighting their way down Oil Creek, which was only twelve rods wide and very crooked as it wormed its way through steep hills. It required all the skill and strength of some five hundred boatmen to avoid collisions with other boats, rocks, and other obstructions. If the boats successfully passed these obstacles, they soon reached Oil City, where Oil Creek emptied into the Allegheny River. Usually the morning after a pond freshet the boatmen started to Pittsburgh with the oil in the same boats, or else they transferred it to larger and stronger barges, which quickly came into use on the river after the discovery of large quantities of oil.

As early as April, 1860, the steamer "Venango" carried the first load of petroleum to Pittsburgh, and within two years there were fifteen steamboats and tow boats plying between Oil City and Pittsburgh, each having an average capacity of about eight hundred barrels. There were also about one hundred flatboats engaged in the trade. The steamboats averaged about three trips a week when the river was in good navigating condition, and the towboats two. It took three to four days to make the trip. The freight charges from Oil City to Pittsburgh ran from twenty-five cents to \$3.00 a barrel; they depended upon the weather, the stage of water, the demand for oil, and whether oil was transported by steamer or bulk boat.

Early in the fall of 1861, Jacob Jay Vandergrift, of Pittsburgh, towed two large coal boats with four thousand empty barrels to Oil City with his steamer, the "Red Fox." While delivering the barrels, Vandergrift bought five thousand barrels of oil for future delivery; he returned home and formed a connection with Daniel Bushnell. As the two partners were trying to figure out a way to get the oil to Pittsburgh, the first boat to carry oil in bulk arrived from Oil City on October 30, 1861. Invented and patented by Richard Glyde, of Pittsburgh, the flatboat carried over 160 barrels in bulk. Oil had been pumped directly from the wells into the boat and thus the use of barrels had been eliminated; this innovation was destined to save well owners and dealers thousands of dollars. After inspecting this boat at Allegheny City, Vandergrift and Bushnell believed that this would be a cheap and feasible means for transporting oil; so they

contracted with a boat builder to build twelve boats, eighty feet long, fourteen feet wide, and three feet deep, each with a capacity of four hundred barrels. Upon their completion in the spring of 1862, Vandergrift and his partner inaugurated a highly profitable bulk-boat business.

Within a short time Captain Vandergrift began buying interests in oil wells up Oil Creek. Since Mr. Bushnell preferred the less hazardous business of transportation, the two dissolved the partnership, and Vandergrift took up his residence at Oil City. Associated with W. H. Ewing, of Pittsburgh, Vandergrift formed one or two companies for producing oil, and had moderate success. His interest now turned, however, to railroads and pipe lines. As a partner of George V. Forman, Vandergrift equipped and began operating a line of tank cars, "The Star Line," carrying oil from Pithole to Oil City. In order to secure business for the Oil City & Pithole Railroad, in which Vandergrift was a heavy stockholder, the two partners laid a pipe line from West Pithole to Pithole—four miles. This line, named "The Star Pipe Line," was the beginning of the great system which now operates under the name National Transit Company.

The importance of the oil trade to Pittsburgh was early realized by some, for on August 23, 1860, the editor of the "Pittsburgh Gazette" wrote: "If the flow of oil continues in the wells that are now producing, Pittsburgh ought shortly to become one of the most important oil marts of the world—a thing that could hardly have been conjectured a short time ago." In the fall of 1860 and the spring of 1861, from seven hundred to one thousand three hundred barrels of crude oil arrived daily at the Allegheny wharf. By the end of 1861, the oil trade began to assume boom proportions; thousands of barrels of oil could be seen upon the Allegheny wharf; the wharf was completely lined with bulk boats and flatboats; and an unbroken line of barrels extended from Pitt Street to about midway between the old aqueduct and Mechanic's Street Bridge. During 1862, 219,718 barrels of oil were brought to the wharf, 344,540 barrels in 1864, and 411,570 barrels in 1865, or about one-half of all the crude oil from the Venango oil region. It was estimated in 1865 that the annual value of the oil brought to Pittsburgh amounted to \$4,000,000. "Pittsburgh," according to one observer in 1865, "which used to be the Iron City, thinks now of little else than petroleum. Barrels of it swarm everywhere. . . . She has become one of the great distributing depots for the trade."

With the growth of the petroleum trade, buyers and sellers of oil became interested in establishing an exchange where producers, refiners and dealers could meet, exchange news, hear reports of stock, of arrivals here and in the East, of shipments to Europe, of prices at Titusville and Oil City, and of the true condition of the supply and demand. The fluctuations in the market price during 1862 had such a ruinous effect upon the oil trade that in January, 1863, a group of oil men met at the office of Henry Harley for the purpose of organizing such an association. Josiah King was elected president, Captain W. H. Byram vice-president, and Robert Schmertz treasurer. At a subsequent meeting on February 2, a constitution and by-laws were adopted; the organization accepted the offer of the Pittsburgh Board of Trade to meet in its room free of rent until July 1; and thus the Pittsburgh Oil Exchange came into existence. So far as the writer is able to determine, this was the first oil exchange in the world. Every day from eleven to one those engaged in the trade congregated at the Board of Trade, where they bought and sold oil. "This institution," according to the editor of the "Pittsburgh Post," was destined "at no very distant date to become one of the most prominent features of our city."

While the city enjoyed the profits from an immense trade in petroleum, it could not and did not escape the dangers involved in handling such an inflammable commodity. On July 30, 1861, Pittsburgh experienced its first fire due to petroleum; it was the most destructive conflagration the city had seen in years. Late in the afternoon four men, employed by the Cornplanter Oil Company, were assisting the city gauger in measuring some two thousand five hundred barrels of oil in the basement of the Duquesne freight house on Liberty Street. Someone lit a gas burner and carelessly threw down the match, which ignited the gas and the fire was quickly communicated to the petroleum. Within five minutes the flames burst forth furiously, spread to every part of the immense building, and within a half hour the entire depot, all of the oil and barrels, \$10,000 worth of sugar, coffee and dry goods, and ten freight cars had been consumed. The fire spread to small tenements on Exchange Alley and thence to dwellings on Penn Street. The aggregate loss amounted to \$160,000.

The fire caused more anxiety in the community than anything ever had, for thousands of barrels of oil were stored in the city in houses, sheds, open lots and cellars. Several hundred citizens, therefore, signed a petition asking the city council to take action to protect life and property. No ordinance was passed, however, until February,

1862, when the city made it unlawful to bring into Pittsburgh "Petroleum, Carbon Oil, Coal Oil in bulk, or other wise than in barrels" or similar vessels. Moreover, the city prohibited the landing of any crude petroleum or carbon oil on the Monongahela wharf between Ferry Street and the Monongahela bridge. Agitation for legislation against storing oil within the city continued, so that in February, 1863, a special committee of the city council met with a committee of oil men to consider the problem. The oil men made an elaborate report upon the extent of the oil business in the city, admitted the necessity of some regulation regarding the storage of oil, and suggested that the ground on the Allegheny wharf between the St. Clair Street Bridge and the Point be reserved for the use of the oil trade. On the other hand, the special committee believed that the trade should be removed from the city and suggested a depot beyond the limits of the Ninth Ward, but the oil men objected to the additional expense involved in handling and hauling oil. Afraid that such legislation would reduce, if not drive away, the oil trade, the council failed to take any action.

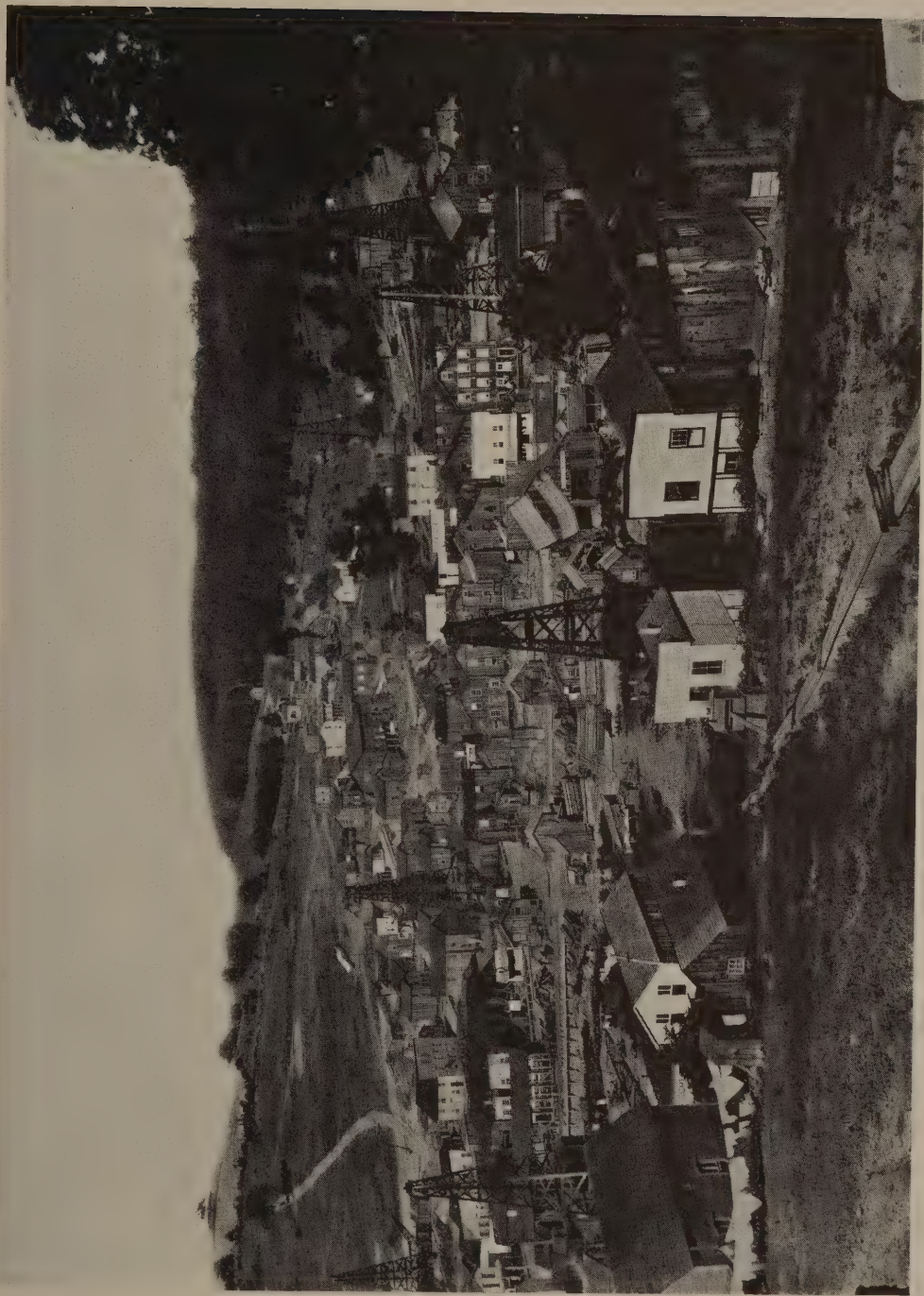
Within a month or six weeks, the whole controversy was revived by a second fire, which broke out among some barrels of crude oil lying at the Allegheny wharf near the end of Marbury Street. It spread rapidly because the burning oil flowed down the river setting fire to bulk boats full of oil on both sides of the river from Marbury Street to the Point. Frantically, firemen and citizens began rolling barrels on the wharf into the river in order to save the buildings along the waterfront, but some persons who had an interest in the oil pulled a gun and threatened to shoot the next person who moved a barrel. The fire spread to some tenements on Croghan Street and over twenty-two families lost everything.

The morning after the fire, citizens at the Point, in a state of feverish excitement, not only declared that they would not allow any more oil to be landed there, but actually cut loose from the wharf a pair of bulk boats which had come down subsequent to the fire. That night the city council met and the general sentiment was that something must be done or else the lower portion of the city would some day be completely destroyed by fire. The council, therefore, passed a resolution requiring the mayor and wharfmaster to enforce, strictly and promptly, the ordinance prohibiting the landing of oil in bulk within the city limits. Furthermore, the council directed the city solicitor to prepare an ordinance against the landing and storing of crude oil within the city, but no ordinance to this effect was passed.

The possible danger from fires starting in refineries had been greatly reduced, for in March, 1861, the city prohibited the "manufacturing, refining, clarifying, or deodorizing of coal oil, carbon or rock oil" within its limits. Therefore, the refineries were forced to locate in the suburbs. The refining of crude oil was necessary before it could be extensively utilized. The chief difficulty everywhere in trying to sell petroleum had been its disagreeable odor, the impurities in the oil, and its dark, muddy color; it needed to be deodorized, decolored and purified, but in 1859 there were no petroleum refineries, except the small ones of Kier, MacKeown and Ferris. Soon after the completion of the Drake well, however, refineries sprang up like mushrooms all along Oil Creek, the Allegheny River, at Union Mills, Corry, Erie and Titusville. In 1859 there was only one refinery in Pittsburgh, and it was capable of refining only fifty barrels a week.

At the end of 1861, Pittsburgh had about thirty-five refineries in operation. "This trade," the "Pittsburgh Post" noted on December 18, 1861, "will ere long be a leading feature in our city and we should take every means to promote and encourage it." The largest dealer in refined oil at the time was S. M. Kier, and the quality of his carbon oil had steadily improved. According to the "Pittsburgh Post," "The specimen of Premium No. 1 Carbon Oil we saw is beautiful; equal to anything we have ever seen, and far superior to most. Was almost as limpid as water, and has been deprived of the disagreeable odor usually distinguishable in carbon oil. It is exactly what it purports, a No. 1 article, and must find a ready sale."

The refining business continued to grow and by the summer of 1862 it was challenging the supremacy of Pittsburgh's iron and glass business. At the time the best refinery in Pittsburgh, and perhaps in the United States, was the Brilliant Oil Works of Lockhart & Frew on the Allegheny River at the mouth of Negley's Run. Tanks, warehouses, dwellings and refinery covered from four to five acres. Built of stone, with an iron roof, the refinery had every modern improvement and its refining capacity was one thousand two hundred barrels a week. Other refineries lined the bank of the Allegheny from the Ninth Ward to Sharpsburg and for miles above. In 1865, Pittsburgh had a larger number of refineries than any other city, and some of the plants were the largest in the world. There were fifty-eight refineries valued at \$2,533,000; they refined annually 716,500 barrels of oil, employed seven hundred workmen, and had a payroll that amounted to at least \$500,000 a year. It was estimated that the



Petrolia, Butler County, 1875

entire petroleum trade, refined and crude, was now worth about \$12,000,000 a year to Pittsburgh.

As the oil business developed in Pittsburgh, it provided a stimulus to all other branches of industry; coopers worked to capacity; the rolling mills found a market for an immense amount of hoop iron; tanners made five and ten-gallon cans for export; chemical laboratories ran to capacity in producing acid and alkali; machinists had more orders for steam engines and boilers than they could handle; coal dealers prospered because refiners were using huge quantities of coal; hotel keepers had a "full house" every night; the value of every kind of property increased; and many new and valuable buildings were erected. The glass manufacturers benefited largely from the trade in manufacturing lamps, globes and chimneys; some plants were turning out four to five thousand lamps a week. In fact, the entire city, directly and indirectly, was engaged in the oil business.

The oil business also proved to be a source of considerable revenue for the city of Pittsburgh, for in October, 1861, the city levied a charge of one cent a barrel on all petroleum, carbon oil, or coal oil landed or placed on the Allegheny wharf, if it remained on the wharf longer than twenty-four hours and less than forty-eight; a half-cent a barrel was charged for each additional day thereafter. The rate was changed in February, 1862, to one cent a barrel for the first forty-eight hours and two cents for every twenty-four hours thereafter. In January, 1864, the city raised these rates one hundred per cent. Finally, the rate was completely revised in the summer of 1865 so that it was two cents a barrel for the first three days, five cents for the fourth twenty-four hours, and ten cents for the fifth twenty-four. The ordinance also prohibited the keeping of barrels on the wharf longer than five days from the time of landing. As a result of this legislation, the city revenue from the Allegheny wharf jumped from \$2,701.15 in 1860 to \$18,602.74 in 1865. The growth of the oil business had been so great that the revenue derived from the Allegheny wharf in 1865 was only slightly below that of the Monongahela wharf, which had long been a source of revenue to the city. In addition to the funds secured from the Allegheny wharf Pittsburgh derived an income from every barrel of oil measured in the city by the city gauger; this revenue jumped from \$2,249.24 in 1860 to \$12,137.59 in 1865. In other words, the city of Pittsburgh derived a total revenue of \$30,840.33 from the oil business in 1865, or one-twentieth of all the city's revenue.

This story of the rise of the petroleum industry in Pittsburgh ends with the wild and unprecedented era of speculation in oil lands and oil stocks that began in 1864 and affected the entire Nation. The greater demands for petroleum, the magical flowing wells along Oil Creek, and the increasing confidence in the petroleum industry as a permanent thing materially aided in developing the boom, but a number of events occurring in 1864 speeded the movement toward a climax. One of the most important factors was the marked improvement in the price of oil. From \$3.00 a barrel to \$4.00 a barrel at the wells in January, 1864, the price steadily rose to \$13.75 in July, the highest since 1860. This encouraged the drilling of new wells in old territory and "wildcatting" in the new. Secondly, the extraordinary career of John W. Steele, more familiarly known as "Coal Oil Johnny," called attention to the easy money-making possibilities in the oil region. Thirdly, the opening up new territory further intensified the excitement. Little or no effort had been made prior to 1864 to drill anywhere except along Oil Creek. With so many producing wells on the creek and the supply exceeding the demand, operators had not found it necessary to seek any other locality. Furthermore, the early oil men had limited means and were reluctant to invest in lands other than those that had been tested and promised a return. But the striking of oil on Cherry Run, a small stream flowing into Oil Creek just above Oil City, in the summer of 1864, precipitated a mad scramble for land there. Lastly, the publicity relating to the huge profits derived by a few of the more successful oil companies acted as a powerful stimulant to the speculative movement.

For example, the earnings of the Columbia Oil Company excited not only Pittsburghers, but people everywhere; it was one of the most profitable of the early oil companies. During the last six months of 1863, the Columbia Oil Company paid its stockholders over \$300,000 in a dividend amounting to more than \$26 a share. On account of the extraordinary dividend, the stock of the company rapidly appreciated, and it was soon worth considerably more than par value on the market. To correct this situation, the capital stock was increased from \$200,000 at \$20 a share to \$2,500,000 at \$50 a share. In April, 1864, the company declared a dividend of \$80,000, in May \$100,000, in June \$100,000. From its earnings for July, 1864, the company divided \$100,000 among the stockholders and had ten thousand barrels of oil on hand, worth over \$100,000; so it had made over \$200,000 in one month. "We have just read the 'Third Annual Report' of this pioneer and colossal corporation," said the editor of

the "Pittsburgh Evening Chronicle" on January 30, 1865, "with the same feeling of interest and confidence that we ordinarily have in perusing State or National official documents. . . . The 'Report' reads like a tale of enchantment. The company is the Aaron's rod which swallows all other rods, and those bewildered petroleumites who are inclined to doubt, wonder, or despond, have only to read over the Columbia's figures, take heart, and bore on."

Oil fever broke out in Pittsburgh during the summer of 1864; an extraordinary number of oil companies were organized and the demand for oil stock was great. "Indeed such is the rage for stocks of this character now here," wrote the editor of the "Pittsburgh Evening Chronicle" on August 26, 1864, "that sales are common in companies where the stock certificates have not yet been issued or the transfer books opened, and instances are not uncommon where stock has been sold at an advance of two hundred per cent before the company was organized." Stocks of such companies as the Lucesco, North American, Dalzell, Allegheny & Pittsburgh, Iron City, Horse Neck, Stella, Federal, Whitley Creek, Acme, Fayette and Story were in greatest demand. The Cherry Run & Pittsburgh Petroleum Company was so highly thought of that within three hours from the time the stock subscription books were opened on November twenty-ninth the entire amount of capital, \$200,000, had been subscribed and scores of people who wanted stock were disappointed. The McClintock Farm & Oil City Company opened its books at 10:00 A. M. on December 8, 1864, and by 1:00 P. M. \$85,000 had been subscribed. "It is going off like hot cakes," exclaimed the editor of the "Pittsburgh Evening Chronicle," "and it is not improbable that the books will close tonight." By the end of 1864, it was estimated that in the large cities of the United States over \$326,000,000 had been invested in oil stocks; Philadelphia was first with \$163,175,000. New York second with \$134,045,000, and Pittsburgh third with \$15,740,000.

As a result of the speculative craze in Pittsburgh, T. A. McClelland, an auctioneer, fitted up rooms in the Masonic Hall, where buyers and sellers could congregate and each night he sold stocks at auction. There was always a large crowd present. Later, McClelland moved to Wilkins Hall and established the "People's Stock Exchange." Within a short time two other auction rooms were opened: Alex McIlwaine's, at 54 Fifth Street, and Charles A. Anderson's, at Central Hall, Dispatch Building. "These stock sales," according to the

"Pittsburgh Evening Chronicle," "are becoming an institution here, and the uninitiated would be surprised at the interest evinced in them."

The owner of the most important auction room and probably the "father of the modern oil stock exchange" was George A. Thurston. His exchange on Fourth Street was formally opened on November 11, 1864, and every night, though he charged twenty-five cents admission, the place was packed with excited buyers, sellers, and spectators; hundreds were turned away. The usual procedure was as follows: at eight o'clock Mr. Thurston would ascend the platform and take up a list of stocks for sale; he began at the top of the list and called out the name of a particular stock, repeating it twice, and then asked: "Are there any sellers?" Those in attendance having stock called out the quantity they desired to sell and the price wanted. Thus one man would cry out: "I will sell five hundred shares at \$25." If the price was too high for buyers, there would be a pause, then someone would cry: "I will take one thousand shares at \$24.25." Another offered to take five hundred at \$24.25, and so on. Sometimes, however, the offer to sell would be immediately accepted. Thurston would then call for the names of the parties, which were given aloud, and were entered on the books. Thus everyone present knew precisely what each particular stock brought and sales were *bona fide* affairs. Occasionally a little incident would transpire to show that the sales were not altogether free from the influence of the "Bulls" and the "Bears." When parties wanted to run down a particular stock, they replied to the offers to sell by tendering ridiculously low prices, or by offering the stock themselves at a figure so far below what it ought to bring that nervous holders became frightened and they were glad to sell at any price.

The sales at Thurston's exchange on November 26, 1864, amounted to 23,657 shares. The stock greatest in demand was the Ritchie Oil Company, and although the company had been organized only a few days before, its stock sold "like hot cakes." The public believed that it would pay seven per cent. a month, and some said ten. Sixteen thousand shares changed hands in one night and the buyers would have been willing to take more if more had been available. Stocks of Tarr, Story and Cherry Run were also eagerly sought.

With the striking of the United States well on Pithole Creek in January, 1865, speculation increased tremendously everywhere, in the oil region and in the eastern financial centers. Attendance at the stock exchanges in Pittsburgh increased and bidding became more spirited than ever. Sales at the People's Exchange reached eighteen

thousand to twenty thousand shares an evening. Altogether seventy oil companies had been organized in Pittsburgh by March 1, 1865. To keep its readers fully informed about the latest developments, the "Pittsburgh Post" began running a special column in 1863, entitled "The Pittsburgh Oil Trade," and in 1865 the "Pittsburgh Evening Chronicle" did likewise, entitling its column "The Oil Interest." Moreover, "The Oil News and Mining Journal," a weekly published in Pittsburgh and devoted to the petroleum industry, made its appearance in 1865.

Even before the speculative boom had reached its peak late in 1865, many unseen forces, domestic and foreign, conspired to produce a severe depression throughout the oil region. As a result, hundreds of small wells were quickly abandoned in 1866, and the daily production fell off by half. The whole region was covered with abandoned derricks, and scores of small refineries began shutting down. A stagnation in business set in from which the oil field did not recover until after 1870.

Since it was completely dependent upon the Venango region, the petroleum business in Pittsburgh quickly declined. The sale of oil stock stopped; the stock exchanges either closed or opened only one or two nights a week. "If there was ever a time since the discovery of petroleum that oil stocks were flat," declared the "Pittsburgh Evening Chronicle" on April 10, 1865, "that time is just now." The amount of oil brought to the Allegheny wharf dropped from 411,570 barrels in 1865 to 753 in 1868. The revenue derived from using the Allegheny wharf fell from \$18,602.74 in 1865 to \$2,631.65 in 1869; and that derived from the city gauger fell from \$12,137.59 in 1865 to \$1,715.61 in 1868.

The oil region ultimately recovered from the depression, but Pittsburgh lost its supremacy as a refining center in 1866 to the neighboring city of Cleveland. The chief reason for Pittsburgh's loss of leadership in refining lay in the unfair discrimination by the Pennsylvania Railroad against the city. Started as a line from Harrisburg to Pittsburgh, the Pennsylvania was not connected with Philadelphia until 1858, when the first through train ran between Philadelphia and Pittsburgh. Even though it now had a direct rail connection with the seaboard, its lack of sufficient rolling stock to handle the freight caused long delays in shipments. As early as 1862 there was considerable agitation to revive the old canal in order to send oil to Philadelphia, but nothing came of it.

In the succeeding year a committee from Pittsburgh Oil Exchange conferred with Pennsylvania Railroad officials to see if the latter could not offer better facilities for transporting oil. A public meeting of merchants and oil men was also held to hear Benjamin H. Latrobe, president of the Pittsburgh & Connellsville Railroad, and at the close of the meeting they adopted two resolutions; one urging Congressional aid to complete the Pittsburgh & Connellsville, and another pointing out that facilities of the Pennsylvania were utterly inadequate to carry the freight.

Two years later the Oil Exchange was still working on the problem. The Pennsylvania's indifference to Pittsburgh's oil business was primarily due to the fact that it wanted to haul the bulk of crude oil, not a short distance to Pittsburgh, but the long distance to Philadelphia and New York. It was not the branch line running north from Pittsburgh into the oil regions that interested Tom Scott, who was in charge of the Pennsylvania's traffic department. He did not care whether they carried any oil from the oil region to Pittsburgh. Instead, he was interested in the Philadelphia & Erie, a branch line of the Pennsylvania, which ran northwest from Philadelphia toward Erie. This railroad tapped the oil region at Corry, and there was stiff competition with the Erie and the Atlantic & Great Western to carry the oil to the seaboard. In order to compete, the Philadelphia & Erie was carrying refined oil from the oil region to Philadelphia as cheaply as from Pittsburgh, yet Pittsburgh was 114 miles nearer. In the second place, the Pennsylvania's indifference was due to the fact that it had acquired the Pittsburgh, Fort Wayne & Chicago in 1869, giving the line a through route from Philadelphia to Chicago. This connection with the West provided the main line through Pittsburgh with all the freight it could carry, without adding oil shipments. Moreover, officers of the road willingly made low rates from Chicago in order to compete with other roads for the rich grain trade of the Mississippi Valley. On the other hand, Pittsburgh had to ship East over the Pennsylvania; it had no other outlet, and it had to pay the regular rates.

In August, 1867, refined oil shipments from Pittsburgh reached eighty thousand barrels; this was the greatest shipment in Pittsburgh's history, no more than fifty thousand barrels having been shipped in any other month. At that time the Pennsylvania lowered its rate to about the same figure as the other roads. Immediately the other railroads lowered their rates, but the Pennsylvania's remained

the same, and most of the refiners in Pittsburgh had to close. At the same time the Erie and the New York Central-Lake Shore system did their utmost to develop the oil business in Cleveland. Under the circumstances, John D. Rockefeller and other Cleveland refiners profited enormously from this situation, and Cleveland, with plenty of labor, capital, cheap coal, two railroads to the seaboard, low uniform freight rates, and direct connections with the oil region, swiftly and surely forged ahead to become the greatest oil refining center in the country.

A Few Characters of the Early Oil Region Days, Some Famous and Some Infamous—The most picturesque character of the early oil period in Venango County, perhaps, was one John Washington Steele, better known as "Coal-Oil-Johnny." For a considerable number of years following 1864 Mr. Steele's nickname was a popular phrase used to describe anyone whose life was devoted to reckless spending of money, spectacular stunts and generally wild and foolish pastimes.

John W. Steele was born in 1843 and, when he and his sister, who died young, were orphaned about two years later, they were adopted by Culbertson McClintock and his wife Sarah. The McClintock farm was located along Oil Creek above Oil City. Culbertson McClintock died in 1855, leaving his farm to his wife and, following her death, to John Steele, his adopted son.

Following the discovery of the Drake well, parts of the farm were leased from Mrs. McClintock by oil operators, paying for a lease several hundred dollars and one-eighth royalty interest. Mrs. McClintock was enabled to make improvements to her house and also decided to do so for young John as well; she planned on him joining with her nephew, David Haynes, in the mercantile business, although the two really never became partners. In 1862, Steele married the daughter of a farmer in Sugar Creek Township, Eleanor Moffitt.

One day in March, 1863, Mrs. McClintock, as many women since have done, attempted to hurry the kitchen fire with kerosene. She was badly burned and, as a result, died the following day. It is believed her death was the first due to the use of oil for this dangerous purpose. She had worked hard and lived frugally, saving considerable money, which she secreted in the house. It has been claimed by some writers that \$200,000 was found in the safe in the house, but this has been disputed and the amount stated is probably an exaggeration.

Thus, at the age of twenty, Steele became the owner of the McClintock farm which became known thereafter as Steele's Flat.

In addition to the cash found in the home, he received one-eighth of all income from the oil produced on the farm. This royalty interest kept coming in regularly by the month. William Blackstone was appointed his guardian and restricted the minor to a reasonable allowance. He was hauling oil when a neighbor told him of the death of Mrs. McClintock. He remained on the farm, collecting his money, attending to business, and it has been said that his conduct was excellent, and that he neither smoked nor drank nor gambled.

Attaining his majority, Mr. Blackstone paid him \$300,000 and he decided to "see some of the world," which he proceeded to do. His escapades were many and fantastic, although many tales concerning him were greatly exaggerated, and many were pure inventions. He squandered thousands of dollars in a day, but generally somebody was benefited by his lavish spending and, often it assumed a practical and worthy form. One day's income from his wells and royalty, twenty-eight hundred dollars, was given toward the erection of the stately soldiers' monument in the Franklin Park, the second in the United States erected to the memory of the fallen heroes of the Civil War; Dan Rice's memorial at Girard, Erie County, was the first.

Mrs. Steele being in impaired health, it was suggested that a change of residence would prove helpful and they moved to Philadelphia. Just about that time a well on his farm known as the Hammond well was drilled in which produced three hundred barrels a day, adding greatly to his already large income.

In a short time, Mrs. Steele returned to the oil region, but her husband remained in the East. Sometime later Mr. Steele returned to make an inspection of his property and to appoint a new farm agent. On this trip he met Seth Slocum, of Erie, and the two men became fast friends and they returned to Philadelphia together. It is said that he gave power of attorney in connection with his affairs to Slocum and that one of the first things thereafter that Slocum did was to escort his friend and benefactor to a tailor shop, where they purchased new suits which were so gaudy that the first day they appeared in them, together with high hats and canes, a policeman arrested them as bounty-jumpers. An examination and explanation at police headquarters resulted in their release.

The name Coal-Oil-Johnny is said to have originated on an occasion when one day Steele and some of his friends were returning from the race track and were driving very rapidly. As the carriage sped

around a corner and startled pedestrians by its sudden approach, someone remarked: "Is not that the coal-oil crowd?" A street urchin shouted: "Yes, that's Coal-Oil-Johnny and his gang!" And it was by that name that Steele was thereafter best known and probably discussed by more people than any other character of his time in the country. One writer has said: "Millions who never heard of John Smith, Dr. Mary Walker or Baby McKee have heard and read and talked about the one and only 'Coal-Oil-Johnny.'"

Steele, who in his early days on the oil farm, hauled oil and was associated with horses, appears to have retained an interest in them. He one time purchased a race horse and, as was so frequently the case, was probably victimized; at any rate, when the horse was to participate in a race, it became paralyzed and did not move.

He had the reputation, while hauling oil under the very difficult conditions that existed in the early days of the oil producing era, of being quite proficient in lurid profanity. Climbing a hill one day with a load of oil, the end-board dropped out and five barrels of oil fell over the steep bank. It was surely exasperating and the spectators expected to hear a special outburst. Steele "winked the other eye" and remarked placidly: "Boys, it's no use trying to do justice to this occasion."

He was constantly indulging in wild and fantastic adventures. One day he met up with a gambler who was broke; Johnny pawned his watch and gave the money to the gambler. Then the gambler had a streak of luck and, with the proceeds, the two men spent the evening having a hilarious time. He one time bought a fancy carriage and had a coat-of-arms, consisting of a flowing well, derrick and oil tanks, painted on each side. The carriage was a common sight on the streets of Philadelphia and always attracted much attention and comments from the crowds. He purchased a cornet on which he practiced for hours at the Girard House, much to the discomfort of the other guests of the hotel. On one occasion, while drinking with a crowd of friends at the Continental Hotel, he conceived the idea of smashing the high hats of his companions and, the next day, purchased new hats for each one. He indulged in skating and boxing and gave up the latter after he was knocked out by his sparring partner.

He gave away carriages after a single drive, kept open house in a big hotel and squandered thousands of dollars a day. Seth Slocum had him in tow and he fell an easy victim to swindlers. He ordered champagne in great quantity and provided costly wine suppers for theatrical companies. The ballet dancers at Fox's old playhouse told

stories of these midnight parties. To a negro comedian, who sang a song that pleased him, he has been said to have handed a thousand dollar pin. He would walk the streets with bank bills stuck in the buttonholes of his coat for the street urchins to grab. He was a great spender, but he never did light cigars with hundred dollar bills or destroy money just for fun as has been claimed. Ten, twenty and fifty dollars quite frequently brought aid to the poor who appealed to him for relief. He gave fine clothes and diamonds to the members of a minstrel troupe touring the country and entertaining crowds in the oil regions.

When the owners of "Gaylord's Minstrels" went broke, he loaned them money to finance their show and, for some time, Slocum and Steele traveled with the show as ticket takers or helpers and marched in the daily parade.

John W. Gaylord, a famous burnt-cork artist and one of the owners of the show, is credited with the following story:

"Yes, 'Coal-Oil-Johnnie' was my particular friend in his palmiest days. I was his room-mate when he cut the shines that celebrated him as the most eccentric millionaire on earth. I was with the Skiff & Gaylord minstrels. Johnnie saw us perform in Philadelphia, got stuck on the business and bought one-third interest in the show. His first move was to get five thousand dollars' worth of woodcuts at his own expense. They were all the way from a one-sheet to a twenty-four-sheet in size and the largest amount any concern had ever owned. The cartoon, which attracted so much attention, of 'Bring That Skiff Over Here,' was in the lot. We went on the road, did a monstrous business everywhere, turned people away and were prosperous.

"Reaching Utica, N. Y., Johnnie treated to a supper for the company, which cost one thousand dollars. He then conceived the idea of traveling by his own train and purchased an engine, a sleeper and a baggage car. Dates for two weeks were canceled and we went junketing, Johnnie footing the bills. At Erie we had a five hundred dollar supper; and so it went. It was here that Johnnie bought his first hack. After a short ride he presented it to the driver. Our dates being canceled, Johnnie insisted upon indemnifying us for the loss of time. He paid all salaries, estimated the probable business receipts upon the basis of packed houses and paid that also to our treasurer.

"In Chicago he gave another exhibition of his eccentric traits. He leased the Academy of Music for the season and we did a big business. Finally he proposed a benefit for Skiff and Gaylord and sent over to rent the Crosby Opera House, then the finest in the country. The manager sent back the insolent reply: 'We won't rent our house for an infernal nigger-show.' Johnnie got warm in the collar. He went down to their office in Root & Cady's music store. 'What will you take for your house and sell it outright?' he asked Mr. Root. 'I don't want to sell.' 'I'll give you a liberal price. Money is no object.' Then Johnnie pulled out a roll from his valise, counted out two hundred thousand dollars and asked Root if that was an object. Mr. Root was thunderstruck. 'If you are that kind of a man you can have the house for the benefit free of charge.' The benefit was the biggest success ever known in minstrelsy. The receipts were forty-five hundred dollars and more was turned away than could be given admission. Next day Johnnie hunted up one of the finest carriage horses in the city and presented it to Mr. Root for the courtesy extended.

"Oh, Johnnie was a prince with his money. I have seen him spend as high as one hundred thousand dollars in one day. That was the time he hired the Continental Hotel in Philadelphia and wanted to buy the Girard House. He went to the Continental and politely said to the clerk: 'Will you please tell the proprietor that J. W. Steele wishes to see him?' 'No, sir,' said the clerk; 'the landlord is busy.' Johnny suggested he could make it pay the clerk to accommodate the whim. The clerk became disdainful and Johnnie tossed a bell-boy a twenty dollar gold piece with the request. The result was an interview with the landlord. Johnnie claimed he had been ill-treated and requested the summary dismissal of the clerk. The proprietor refused and Johnnie offered to buy the hotel. The man said he could not sell, because he was not the entire owner. A bargain was made to lease it one day for eight thousand dollars. The cash was paid over and Johnnie installed as landlord. He made me bell-boy, while Slocum officiated as clerk. The doors were thrown open and every guest in the house had his fill of wine and edibles free of cost. A huge placard was posted in front of the hotel: 'Open house today; everything free; all are welcome!' It was a merry

lark. The whole city seemed to catch on and the house was full. When Johnnie thought he had had fun enough he turned the hostelry over to the landlord, who reinstated the odious clerk. Here was a howdedo. Johnnie was frantic with rage. He went over to the Girard and tried to buy it. He arranged with the proprietor to 'buck' the Continental by making the prices so low that everybody would come there. The Continental did mighty little business so long as the arrangement lasted.

"The day of the hotel transaction we were up on Arch street. A rain setting in, Johnnie approached a hack in front of a fashionable store and tried to engage it to carry us up to the Girard. The driver said it was impossible, as he had a party in the store. Johnnie tossed him a five hundred dollar bill and the hackman said he would risk it. When we arrived at the hotel Johnnie said: 'See here, Cabby, you're a likely fellow. How would you like to own that rig?' The driver thought he was joking, but Johnnie handed him two thousand dollars. A half-hour later the delighted driver returned with the statement that the purchase had been effected. Johnnie gave him a thousand more to buy a stable and that man today is the wealthiest hack owner in Philadelphia."

The fantastic story about the leasing of the Continental Hotel was published in a Philadelphia newspaper and it received wide circulation and was generally believed, but its authenticity has been denied and it has been claimed that the publication of the story was one of the reasons that Steele developed an antagonistic attitude toward the press. Perhaps, like many other stories told about Steele, some of which were pure fiction and others much exaggerated, the incident as really related by Gaylord was greatly embellished by a newspaper writer in order to make it more sensational. Gaylord, who had greatly profited by Steele's generosity, and Steele remained fast friends even after Steele had entirely lost his money.

Before going to Philadelphia, Steele met Daniel Fowler, of Meadville, to which city Steele had gone, it is said, to purchase a team of horses. Through Fowler, he met Horace Cullom, who must have been the champion real estate salesman of that day, as he has been reputed to have sold to Steele about half of Meadville. These purchases included a building at \$45,000, a large home for \$10,000, building lots at \$5,000 and a farm for \$7,000. The purchases were

made with down payments of several thousand dollars and monthly payments thereafter. Many years later, when he discovered how unwise were his real estate investments, he has been reputed to have said: "I knew as much about real estate as a pig knows about the dead languages."

In 1865, both Fowler and Cullom entered judgments against Steele and Fowler called upon Mrs. Steele and induced her to sign over to him deeds for all of the Meadville properties, paying her, it is said, the sum of \$3,000 for doing so. Numerous other judgments, including one of the Girard House, followed and his creditors took over his oil property, which was sold by the sheriff early in 1867 for \$35,000.

Coal-Oil-Johnny had now come to the end of his spectacular career and, his money gone and in poor health, he left Philadelphia and returned to Franklin. Before leaving the Quaker City, he looked up his cab driver and gave him the carriage with the coat-of-arms on it which had been such a familiar sight on the streets of that city, thereby making the driver happy.

Slocum followed Steele to Franklin and, although he entreated Steele to keep him with him, Steele insisted that their association had come to an end. Johnny finally drifted to Kansas City, where he again met his old friends, Gaylord and Skiff, the minstrel men. They gave him a job as ticket-taker and he traveled with the show during part of 1866 and 1867. While with the show, he received a letter from his wife requesting that he return home, which he decided to do.

His father-in-law, Mr. Moffitt, received him kindly and he was reunited with his wife and son. He got work hauling barrels for Henry Cullom, son of Horace Cullom, the man who had sold him the Meadville real estate when he had plenty of money, and it has been said that Cullom never paid him for his work. He then secured the position of baggage master in the Rouseville depot at the salary of \$80 per month.

In 1873 he went to Pittsburgh and attended a business school. Later the family went West and, after living in several Iowa and Nebraska towns for awhile, finally settled in Louisville, Nebraska. When he was at the height of his spectacular career Captain J. J. Vandergrift and T. H. Williams kindly urged him to save some of his money. He thanked them for the friendly advice, said that he had made a living hauling oil and could do so again if necessary, but that he could not rest until he had spent that fortune. He spent the fortune and created plenty of excitement in doing so and, although he

did not again haul oil, he did return to work after his fortune had been dissipated and settled down to an orderly life. He farmed, saved money and entered the service of the Chicago, Burlington & Quincy Railroad as baggage master. Gradually his name was less frequently heard and the manufacturers of a one time very popular brand of soap, "Coal-Oil-Johnny Soap," withdrew the product from the market because of the decline in sales. His name, however, is still not forgotten. Not long ago in a motion picture, "Kitty Foyle," starring Ginger Rogers, the actress, referring to the way in which her boy friend spent money, described him as "a regular Coal-Oil-Johnny."

"Ben Hogan"—The most notorious of the undesirable types was this prize fighter, who made his advent at Petroleum Center. His chief business was operating "dance halls" of the lowest type. His principal ring battle was with "The" Allen in Iowa, but he gave some brutal exhibitions in the oil region with less famed pugilists. His conduct at Petroleum Center aroused so much indignant feeling that he removed to Babylon, a lawless village near Tidioute. Then he returned to Petroleum Center, but was soon made to understand that he would not be tolerated. With the drift of population to the fields down the Allegheny River, Hogan turned up in Parkers Landing, where he made a worse record. When the law was invoked, he had built a large house boat, named the "Floating Palace." The line dividing Armstrong and Clarion counties was in the river, and when officers of the law in Parkers Landing went after Hogan, the "Palace" moved over to the Clarion County shore. When complaint was made in Clarion County, the "Palace" floated back to the Armstrong side. But eventually preparations for a concerted attack from both sides drove him out. He migrated to Petrolia, in Butler County, where he opened the "Seminary." In 1876 he located in Elk City, Clarion County, a considerable town with no organized government, or police, located only about a mile from Edinburg, the metropolis of the Clarion County field. The stories of Hogan's "joint" in Elk City were thrilling, including riots and suspected murders, but none was proven. Hogan was finally compelled to move again and landed in Tarport, near Bradford. It was when the temperature of Tarport grew too warm for him that Hogan went to New York, intending to sail for his native Germany. Before embarking he procured the writing and publication of his book, "Ben Hogan, the Wickedest Man in the World." Attending a mission, he professed repentance, posed as an apostle and later conducted a mission in Chicago.

John Wilkes Booth—In the spring of 1864 a young man, black-haired, dark-eyed, an Apollo in form and strikingly handsome, arrived in Franklin and engaged rooms at Mrs. Webber's, on Buffalo Street. The stranger had money, wore good clothes and presented a letter of introduction to Joseph H. Simonds, dealer in real estate, oil wells and leases. He looked around a few days and concluded to invest in sixty acres of the Fuller farm, Cranberry Township, fronting on the Allegheny River. The block was sliced off the north end of the farm, a short distance below the upper bridge and the Pennsylvania Railroad station. Mr. Simonds consented to be a partner in the transaction. The transfer was effected, the deed recorded, and a well started. It was situated on the hill, had twenty feet of second-sand and pumped twenty barrels a day. The owner drilled two others on the bluff, the three yielding twenty barrels for months. The ranks of the oil producers had received an addition in the person of John Wilkes Booth.

The firm prospered, each of the members speculating and trading individually. M. J. Colman, a capital fellow, was interested with one or both in various deals. Men generally liked Booth and women admired him immensely. His lustrous eyes could look so sad and pensive as to awaken the tenderest pity, or fascinate like "the glittering eye" of the Ancient Mariner or the gaze of the basilisk. A writer has said of him: "Trilby had not come to light, or he might have enacted the hypnotic rôle of Svengali." His moods were variable and uncertain. At times he seemed morose and petulant, tired of everybody and unsocial. Again he would court society, attend parties, dance, recite and be the life of the company. He belonged to a select circle that exchanged visits with a coterie of young folks in Oil City. A Confederate sympathizer and enemy of the government, his closest intimates were staunch Republicans and loyal citizens. William J. Wallis, the veteran actor who died in December of 1895, in a Philadelphia theatre, slapped him on the mouth for calling President Lincoln a foul name. Booth's acting, while inferior to his brother Edwin's, evinced much dramatic merit. He controlled his voice admirably, his movements were graceful and he spoke distinctly, as Franklinites whom he sometimes favored with a reading were able to testify.

One morning in April, 1865, he left Franklin, telling Mr. Simonds he was going East for a few days. He carried a satchel, which indicated that he did not expect his stay to be prolonged. His wardrobe, books and papers remained in his room. Nothing was heard of him

until the crime of the century stilled all hearts and the wires flashed the horrible news of the assassination of Abraham Lincoln. The excitement in Franklin, the murderer's latest home, was intense. Crowds gathered to learn the dread particulars and discuss Booth's conduct and utterances. Not a word or act previous to his departure pointed to deliberate preparation for the frightful deed that plunged the Nation in grief. That he contemplated it before leaving Franklin the weight of evidence tended to disprove. He made no attempt to sell any of his property, to convert his lands and wells into cash, to settle his partnership accounts or to pack his effects. He had money in the bank, wells bringing a good income and important business pending. All these things went to show that, if not a sudden impulse, the killing of Lincoln was prompted by some occurrence in Washington that fired the passionate nature of John Wilkes Booth, which he inherited from his father. The world is familiar with the closing chapters of the dark tragedy—the assassin's flight, the pursuit into Virginia, the burning barn, Sergeant Corbett's fatal bullet, the pathetic death scene on the Garrett porch and the last message, just as the dawn was breaking on the glassy eyes that opened for a moment: "Tell my mother I died for my country. I did what I thought was best."

The wells and the land on the river were held by Booth's heirs until 1869, when the tract changed hands. The farm did not long thereafter produce oil and the Simonds-Booth wells disappeared. Had he not intended to return to Franklin, Booth would certainly have disposed of these interests and given the proceeds to his mother.

The following is quoted from "Sketches in Crude Oil," published in 1896 by John J. McLaurin:

"'Joe' Simonds removed to Bradford to keep books for Whitney and Wheeler, bankers and oil-operators, and died there years ago. He was an expert accountant, quick, accurate and neat in his work and most fastidious in his attire. A blot on his paper, a figure not exactly formed, a line one hair-breadth crooked, a spot on his linen or a speck of dust on his coat was simply intolerable. He was correct in language and deportment and honorable in his dealings. Coleman continued his oil-operations and, in company with W. R. Crawford, a real-estate agency until the eighties. He married Miss Ella Hull, the finest vocalist Franklin ever boasted, daughter of Captain S. A. Hull, and removed to Boston. For years para-

lytic trouble has confined him to his house. He is 'one of nature's noblemen.'"

Booth proved to be a most contradictory character. He was known to be unusually interested in and kind to dumb animals, provided for the care of stray dogs and cats and, on occasions, interfered when teamsters, as was frequently the case in the days of the early oil excitement, abused their horses. He often gave a newsboy a dollar for a paper, telling him to keep the change and make good use of it. Still he plunged the Nation into great grief by his act in the assassination of the beloved Lincoln.

After shooting Lincoln and leaping to the stage of the theatre, Booth cried: "Sic Semper Tyrannis. The South is avenged." His closest friend and companion in Franklin, Alfred Smiley, wrote the following:

"Notwithstanding the fact that the presidential campaign between Abraham Lincoln and George B. McClellan, with all the excitement attending those contests, was going on during the short time I knew Booth, I never heard him talk a word of politics. I never heard him say a word about any of the leading actors on either side of the Civil War, which was still in progress, or even make any reference whatever to either the North or the South."

The day after the tragedy, "The New York Herald," in its account said: "The person who fired the pistol was a man about thirty years of age, about five feet nine, spare-built, fair skin, dark hair, apparently bushy, with a large moustache. Laura Keane and the leader of the orchestra recognized him as J. Wilkes Booth, the actor, and a rabid secessionist." If he really was a rabid secessionist, he never aroused the least suspicion of the fact during the time he was in the oil regions and many authorities are of the opinion that some incident, or some association, while in Washington, motivated his rash, and possibly impulsive, act. It is safe to assume that, had the wise and humanitarian Lincoln lived, the South would have suffered much less during the Reconstruction period following the war.

Following this crime, a rumor persisted for years which was entirely without any foundation. It was said that Booth had owned an interest in the famous Homestead oil well at Pithole City and that the same night he shot Lincoln, the well was destroyed by fire at about the same moment he fired the fatal shot. Booth formerly did own a

small interest in this well, but after holding it a short time, he sold his share, it has been said, for more than \$12,000. Furthermore, the well was not completed until June, 1865, or two months after the death of Lincoln.

The Great Benninghoff Robbery—John Benninghoff, a German farmer living on Benninghoff Run, had two large pieces of land. Pioneer Run crossed the northeast corner of the property, the greater part of which was on the hills. Five acres on Oil Creek and the slope on Pioneer Run were first developed. Leases for a cash bonus and a liberal royalty were eagerly sought. Up Benninghoff Run and back of the hill operations spread. For one piece of ground the owner refused tempting offers, because he would not permit his potato patch to be disturbed. Some wells pumped and some flowed from twenty-five to three hundred barrels a day and for seven days in the week. William Jenkins, the Huidekoper Oil Company, the DeKalb Oil Company and Edward Harkins had prolific productions. The first well ever cased and the first pump station were on the hill-side at the mouth of Benninghoff Run. Wealth was suddenly showered upon the thrifty landowner. He one day found himself immensely rich and, one night, was awakened to find himself famous, the newspapers devoting whole pages, with "scare heads" to the humble farmer of Benninghoff Run.

Being suspicious of banks, as were many others in those days, Benninghoff stored his money at home. He purchased a cheap safe which he placed in a corner of the living room and in which he had a half-million dollars in gold and greenbacks. Friends warned him of the danger of thieves breaking in and stealing his wealth.

James Saeger, of Saegerstown, a popular young fellow, belonging to a respectable family, heard of the fortune in this crude safe and concluded to appropriate it to his own use. He spoke to George Miller of the ease with which the safe could be cracked and engaged two Baltimore burglars, McDonald and Elliott, to manage the job. Jacob Shoppert, of Saegerstown, and Henry Geiger, who was employed by Benninghoff and slept in the house, were also enlisted. The robbery, planned with great care, was fixed for a night when Joseph Benninghoff, the son, was to attend a dance.

On the evening of January 16, 1868, Saeger, Shoppert, McDonald and Elliott left Saegerstown in a two-horse sleigh for Petroleum Center, twenty-nine miles distant. At midnight they knocked at the door of Benninghoff's house. Geiger answered the rap and was quickly

gagged, said to have been previously arranged. John Benninghoff, his wife and daughter were bound and the experts went to work on the safe. The frail safe soon yielded and the thieves gathered up the contents, helped themselves to Mrs. Benninghoff's pies, drank a gallon of milk and departed, leaving the inmates of the house securely tied. Joseph returned an hour or two later and relieved the prisoners. An examination of the safe revealed that two hundred sixty-five thousand dollars had been taken, the bulk of which was in gold. A package of two hundred thousand dollars, in large bills, wrapped up in a brown paper, was overlooked by the thieves. The alarm was given, the wires flashed the news everywhere and the press carried sensational reports. By mid-day the following day the oil regions had been aroused to the greatest excitement and all over the United States people were talking about the "Great Benninghoff Robbery."

Saeger and his companions drove back and stopped at Louis Warlde's hotel to divide the spoils. McDonald, Elliott and Saeger took the greater part of the money, Geiger and Shoppert received smaller sums and Warlde accepted thirteen hundred dollars for his silence. The Baltimore toughs lingered in the neighborhood a week and then went to Canada, Saeger staying around home. Intense excitement prevailed. Hundreds of detectives, anxious to gain a reputation and the reward of ten thousand dollars, worked on the case. Ex-Chief of Police Hague, of Pittsburgh, was especially alert. For three months the search was without results. George Miller, whom McDonald wished to put out of the way "to keep his mouth shut," in a quarrel with Saeger over a game of cards, blurted out: "I know about the Benninghoff robbery." Saeger pacified Miller with a thousand dollars, which the latter spent quickly. Jacob Shoppert was his constant companion and the two spent money at a rate that caused officers to watch them. Shoppert visited a town on the edge of Ohio and was arrested. Calling for a pen and paper, he wrote to Louis Warlde, the Saegerstown hotel keeper, reproaching him for not sending money. The jailer handed the detectives the letter, on the strength of which Warlde, who had started a brewery in Ohio, and Miller were arrested. The three were convicted and sentenced to a short term in the penitentiary. Geiger's complicity in the plot could not be proved beyond a doubt, and he was acquitted. Officer Hague captured McDonald and Elliott in Toronto, but Canadian lawyers found flaws in the papers and they could not be extradited. Escaping to Europe, they were heard of no more. Saeger, who had not been

suspected until after his departure, went West and was lost sight of for sometime.

Three years later a noted cattle king of the Texas-Colorado trail entered a saloon in Denver to treat a party of friends. The bartender, Gus Peiflee, formerly of Meadville, recognized the customer as "Jim" Saeger. He telegraphed East and Chief of Police Rouse, of Titusville, hurried off to Denver with Joseph Benninghoff. They secured extradition papers and arrested Saeger, who coolly remarked: "You'll be a devilish sight older before you see me in Pennsylvania." Their lawyers informed them that a hundred of Saeger's cowboys were in the city, reckless, lawless fellows, certain to kill whoever attempted to take him away. Rouse and Benninghoff dropped the matter and returned home without their prisoner. John McLaurin, writing in 1896, said: "Saeger is living in Texas, prosperous and respected. He is just in his dealings, a bountiful giver, and not long ago sent five thousand dollars to the widow of George Miller." Fortunately for John Benninghoff, the robbery still left him enough money for his needs the rest of his life. He eventually sold his oil property and moved to Greenville, Pennsylvania, where he died in 1882.

Fire, the Great Enemy of the Petroleum Industry—In the early days in the oil fields, fire proved a very destructive element. We have petroleum and natural gas to burn. Except for a few of the heavier residuals the products of petroleum are valuable for their combustible quality and natural gas has no other useful characteristic. Since this is true it might naturally be expected that fire has been a regular accompaniment of the industry and so it has been. The list of oil country fires would be very long and to recite the details of them would require several volumes. Yet fire is a feature in the romance of petroleum and gas which is deserving of mention.

The first oil fire occurred at the first oil well, except for those in other lands long before the birth of the petroleum industry in our own country, and those which it has been reputed the Indians caused on Oil Creek hundreds of years ago. We also have some record of huge fires in Kentucky during the first half of the nineteenth century, resulting from the oil that flowed from wells drilled for salt. However, we are interested in the fires associated with the oil industry, and the first occurred at the Drake well.

About two months after the Drake well had been put to pumping, "Uncle Billy" Smith, who had drilled it, thought something had gone wrong late in the evening. He went forth with a lamp to find the

trouble, but failed to locate it. Finally, he went into the shed that had been built over the tanks into which the oil was pumped. An explosion occurred that hurled the astonished Smith and his lamp out of the enclosure, which was fortunate, for there was almost instantly a great conflagration. Tanks, oil, derrick and Smith's house were soon in flames, the Smith family scantily clad, but without injury. Drake's only comment on the episode was to say to Smith: "You were fortunate to escape. I am glad no life was lost."

The first fatal oil well fire occurred on April 17, 1861. A well owned by Little & Merrick, sub-lessees of Rouse, Mitchell & Brown, on the John Buchanan farm, Rouseville, Pennsylvania, came in flowing at the rate of fifty barrels an hour. The news spread rapidly, as this was the first big flowing well on Oil Creek. A crowd gathered quickly, including Henry R. Rouse, one of the owners, and a partner in the second and third wells completed on Oil Creek. The gas hung like a cloud about the well and oil soon covered the swampy land. Mr. Rouse stood on a hummock near the well when the gas ignited at a neighboring boiler. There was a terrific explosion that shook the village and the oily swamp was all ablaze. Mr. Rouse started to run, drew from his breast pocket a wallet containing papers of value to his business associates and hurled it outside the belt of fire. He fell as he ran, but protected his face in the mud, arose and ran again until he fell, exhausted, just outside of the fire zone, where he lay until rescued. He lived a few hours in great agony, but dictated a will as clear in its provisions as one in prime health might have prepared, making bequests to his father, friends and acquaintances. The residuary estate served to abolish poor tax in Warren County, where he resided, the bulk of his estate being left to Warren County for the benefit of the poor. In the County Home of Warren County, which was made possible by Rouse, may be seen today his heavy boots. Fourteen others died from their burns and thirteen more were disfigured for life by this fire. The details of this tragedy were recorded by George H. Dimick, who was clerk in the office of Rouse, Mitchell & Brown. He, too, would have been burned but for the fact that before going to view the wonder of a flowing well, he had gone to arrange for a supply of barrels to save the oil.

While this tragic accident at Rouseville served to warn against an assemblage of spectators about newly opened flowing wells, it did not prevent frequent similar fires in which workmen on the wells perished. Neither did this experience or that of "Uncle Billy" Smith at the Drake well suffice to warn the public, generally, not to take

fire or open lights near fresh oil or escaping gas. The history of Oil Creek was a succession of fires, many of them very serious. Tanks were buried in the ground as one means of fire prevention, but this simply facilitated ignition when burning oil flowed over them from higher ground. Iron tankage was first devised, not on account of the strength that would permit of large storage, but for greater safety to the contents. The great fires on Benninghoff Run in 1865 and 1866 were among the most terrifying. Great quantities of blazing oil ran down the valley, adding to its volume as the flames seized oil wells and tanks along the way. Workmen, residents, one and all, who happened to be there, were compelled to climb the steep hillsides in great haste, to seek safety on the heights. The unique "Horse Railroad" was badly damaged, ties being burned and rails warped by the terrific heat. The "Horse Railroad" was one of the enterprises to secure better and cheaper transportation, evolved in 1865, the birth year of successful pipe lines. It was constructed by J. V. Criswell & Company at a cost of about \$20,000. The mode of operation was to drag a car up with the aid of four mules, load it with barrel oil and run it down by gravity, in charge of a brakeman to regulate the speed. While one car was being loaded, the faithful mules were driven to the bottom of the incline and returned, towing a second car. The enterprise was not much of a success, while the pipe line of Harley, Abbot & Company, from Benninghoff to Shaffer was. This line, however, had trials of its own. The teamsters, who feared loss of their business, broke it several times and, on the night of April 18, 1866, they introduced the great enemy of oil, burning several of the pipe line tanks on Benninghoff Run. Two nights later a mob attacked the guards, who had been placed at the Shaffer terminal, firing upon and driving them back. The guards rallied, however, returned the fire, wounded one man seriously and several others slightly, won the day and saved the pipe line property.

The year 1866 had a very bad fire record. The devastation of Cherry Run, resulting from a boiler explosion, occurred in this year. The man responsible for the disaster, by turning cold water into a dry, hot boiler, was instantly killed and the valley in less than a quarter of an hour was a seething mass of flames. From the hilltops the men who had escaped with their lives could hear the detonations when the furnace heat raised too much steam on their boilers and sent them to join the original cause of the trouble. At that time the valley was a forest of derricks; the side of the road was lined with offices,

eating houses and refineries; tanks of oil were scattered everywhere and the flames leaped from one to another with incredible rapidity.

The first great town fire occurred at Oil City May twenty-sixth, destroying all that portion of the city on the north side of the Allegheny River and the east side of Oil Creek, save the heights, then known as Cottage Hill. The losses exceeded \$1,000,000 despite the efforts of thousands of men to control the flames.

Twenty wells and thirteen thousand barrels of oil burned at Pithole on August sixth, entailing a heavy loss, and several smaller fires visited that city, consuming many buildings and much oil. On September first, twenty-five wells and five thousand barrels of oil burned on Dennis Run, near Tidioute, the loss being estimated at \$100,000. In addition to these large fires there were many more of smaller proportions in the towns and among the wells. It was really a year of misfortune, including the collapse of Pithole and the failure of the string of banks and other enterprises headed by C. V. Culver. These disasters convinced thousands that business in the oil regions was extra hazardous, and many retired to other pursuits, and were not enticed back by the success of friends who remained and took the chances of meeting disaster.

The success of pipe lines and iron storage tanks led to the erection of many of the latter. It was not long until it was learned that these oil reservoirs had a special affinity for lightning. The conjunction of the two became so frequent that a system of mutual insurance was established by the pipe lines, by which fire losses were assessed *pro rata*, or by "general average," upon all owners of oil held by the line whose tank was burned. The pipe line, alone, bore the loss of the tank. Incidentally, another peril was introduced to oil region dwellers, who were liable to be aroused during or after any thunder storm with the warning to get out of the way of a flood of burning oil. A large iron tank may be expected to "boil over" two or three times before its contents are consumed. The pipe line companies soon learned to surround their storage tanks with embankments to lessen the destruction. Various contrivances were tried to conduct the lightning to earth outside of the tanks. Next, small cannon were procured to perforate burning tanks, that the oil might be wasted before the flames reached it. This was soon improved upon by the installation of pumps to draw off and save the oil. The more modern practice was to group storage tanks on "tank farms," which are systematically ditched, to carry off burning oil, equipped with pumps to transfer oil from the bottoms of burning tanks to others and with steam

pipes leading into the tops of tanks to smother flames. These precautions greatly reduced the losses from fires.

The affinity of lightning for fresh oil is easily explained in the fact that from an open tank a column of gas rises to a great height. This gas is an excellent conductor and the electrical charge simply follows it to its base. The same phenomenon is observed in connection with barns, where green hay is stored, and accounts for the frequent destruction of such buildings by lightning. A gas well, with free vent, is an even more inviting mark for lightning. The most spectacular instance of gas well and lightning was near Caney, Kansas, in the spring of 1905. The well was the property of the Kansas Natural Gas Company. It was being drilled in, having an enormous pressure and a flow of probably twenty-five million cubic feet daily. A severe electrical storm came up, and on the advice of J. C. McDowell, vice-president and general manager of the company, the workmen left the well for safer quarters. They were not far away when lightning and gas met. Seemingly a great pillar of fire leaped from the earth to meet the descending bolt. There was a deafening crash, and then the pillar of fire only remained. For twenty feet above the earth there was no flame, the compact stream of gas excluding the oxygen; above that the pillar of fire broadened for fifty feet and for the remaining fifty narrowed to the apex, irregularly. The roar was deafening. The conquest of this monster was accomplished after three weeks of arduous labor, the work being directed by Mr. McDowell on the most approved lines. Orders were given by signals, as words could not be heard above the din and the workmen stuffed their ears with cotton to avoid permanent injury to the auditory apparatus. The fire was finally extinguished by dropping over it a huge boiler plate funnel, with a valve, by means of which the flames and gas were separated until the former were dissipated.

On the night of February 21, 1873, fire broke out in the saloon of Fred Hepp, St. Petersburg, Clarion County, shortly after ten o'clock. At three o'clock on the morning of Washington's Birthday the town was a mass of blazing and smoking ruins. More than five hundred families were homeless on a bitterly cold winter day. Such is the summary of a typical oil town conflagration. The flames from the little groggery communicated to the big Cramer Opera House adjoining. There was no fire fighting apparatus in the town and no adequate water supply. There had been too much haste in building

the town and developing the surrounding oil territory to give thought to protection from fire. The opera house burned like tinder. A high wind from the west drove the flames up the main street and they traveled at amazing speed. Bucket brigades worked with frenzied energy; willing hands carried out household goods, merchandise, anything portable and worth while. But the fire increased in fury and spread in area. An attempt at midnight to make a gap by tearing down a corner building only resulted in strewing the débris across both streets for the flames to cross easily. Finally the destruction was arrested by tearing down two buildings, covering the roofs of the next with wet salt and curtaining the sides with quilts, kept saturated with brine. Threescore of buildings in the town were saved, but \$200,000 worth of property had been destroyed in four hours. The men from Antwerp, a mile away, were heroes in the battle against the flames, and each of them took home with him some of the shivering, homeless sufferers. Rebuilding had been begun on the evening of the twenty-second. September third, less than seven months afterward, Antwerp burned, with the exception of three buildings, and was never rebuilt. The men of St. Petersburg returned the winter favor, with less success. The loss of the smaller town was about \$50,000. On December twelfth, the town of Modoc, in the Butler County field, was burned.

On March 16, 1874, Modoc was burned again, with a loss of \$100,000, the first of a series of bad fires in that county. Millers-town followed on April first. In addition to the great property loss, six persons were burned to death in this fire. The loss was \$200,000. There were many narrow escapes from death, as the fire started after midnight, and hundreds failed to save even necessary wearing apparel. The town was rebuilt on a larger scale, for the petroleum development in the vicinity had but fairly begun, and it was burned again on December 7, 1877, with smaller property loss and no lives sacrificed. It had its third visitation a few years later when the oil excitement had subsided. December 2, 1874, Karns City, in the Butler field, was burned, having no better protection against fire than Millerstown. The buildings in these towns were entirely of wood, and for the greater part of such flimsy construction as to feed flames readily. Edenburg, in Clarion County, was burned January 14, 1877, loss \$65,000, but rebuilt larger and better than before. October 12, 1878, it burned again, with a loss of \$400,000. It burned during the night amid indescribable scenes of confusion, the origin supposed to be

incendiary. This town was again burned May 22, 1880, and then provided a water works and some hose. But little of the burnt district was rebuilt after the last fire in which the loss was \$87,000. Bradford had its first big fire the same year on April second, loss \$100,000. It suffered from several others of even greater proportions before acquiring a first-class fire department.

The Bradford field suffered severe and frequent losses by lightning, and even more from bush fires, a large portion of that area being forested when the oil development began. Thus, on May 6, 1880, the burning of some brush near Rew City started a fire that resulted in the destruction of three hundred well rigs and forty thousand barrels of oil. The first swept over Rew Summit to Harrisburg Run, Foster Brook and down that valley from Red Rock to the East and West Branches of the Tunungwant. On the ninth day of the same month the town of Rixford was burned, forty-three wells and two thousand barrels of oil in tanks at the wells. On May twelfth the bush fires were raging in Tram Hollow, Ohio Valley and along Kendall Creek, the destruction including 292 wells, 125,000 barrels of oil, including a 25,000-barrel iron tank in Tram Hollow, fifty buildings and the United Pipe Lines' pumping station. On July fifteenth, the same year, lightning struck thirteen well tanks in the Bradford field, one iron tank at Duke Center, on Kendall Creek, and two at Custer City, on the West Branch. But the Bradford field was not the only sufferer that year. On June eleventh lightning struck a tank of the Tidioute and Titusville Pipe Line at Titusville. The fire communicated to the Acme Refining Company's works and destroyed them, involving a loss of \$1,000,000, and endangering the entire city. At Turkey City two thirty-five thousand-barrel tanks were burned. This was a fiery year above the average, but not standing alone by any means. Other years brought even greater losses. Bush fires raged in the Bradford field and for at least one other year the losses from them exceeded those of 1880.

Better methods have limited the losses in the newer fields, but Ohio, Indiana, Illinois and Oklahoma all had their spectacular conflagrations in which lightning played its part. The big tank full of fresh oil is always a favorite mark, although "skimming" of gasoline from the crude lessens the danger. Fires at refineries have been frequent and disastrous. Gasoline and benzine are highly inflammable and they cannot be extracted from crude without heat. Fires are a natural consequence. These often are attended by explosions which

throw the inflammable liquid about, not infrequently enveloping employees and bringing to them a fiery death. Refining companies provide their own insurance funds, which is not a small item in their annual expense. Some maintain a fund for the benefit of employees who may be killed or injured, the families of dependents being well cared for. All large refineries have their own fire fighting apparatus and are often of timely service to towns in their vicinity. Their fire-fighters are well trained and their equipment of the best. Fires have even broken out on oil carrying ships at sea, and no more thrilling experience can befall any man than this, of having fire in so inflammable a cargo in midocean. Lightning has been the cause in several instances. But these vessels are divided into tight compartments, equipped with close fitting manhole covers and with all else that may serve to conquer an oil fire. Disasters are rare compared with the seeming dangers of navigation of this type of craft.

An oil fire is a spectacle that once seen is never forgotten. At night it is a scene of grandeur indescribable. When a large tank is struck by lightning there is a burst of flame, leaping fifty feet or more above the tank, followed almost instantly by a huge column of black smoke. Those who have seen a factory chimney belching smoke from the green fire of bituminous coal, may conceive a chimney two hundred feet in diameter pouring forth the blackest of smoke in vast rolls. As these inky waves roll over in their ascent they turn red hot as they reach more oxygen at the circumference of the column. These flashes of light continue to a height of more than a hundred feet, half way to the top of the full grown, churning pillar of smoke. This aspect continues for hours, until tank and oil become sufficiently heated to "boil over." This ebullition is appalling. The flames, previously half smothered in smoke, now leap high in the air, there is a terrible roar and then boiling, burning oil rushes out like molten lava from a volcano in eruption. The heat is intolerable at a distance of three hundred yards and the fiery flood races over the ground until it meets a barrier, or finds its way into stream or ravine, to flow onward until consumed. Green leaves have been burned from the tops of tall trees a thousand feet from a burning tank, in an instant of time, when the wind turned in that direction, and woe be it to the man who gets in the path of the fiery flood from the overflow. Racing with a prairie fire is child's play compared with escape from the flaming torrent.

Fire is terrible and flood is irresistible, and the combination of the two is the extreme of horrors. However, Oil City and Titusville

were devastated by flood and fire on Sunday, June 5, 1892, in the most terrible manner.

Sixty-nine persons lost their lives in the disaster and many homes and business blocks were destroyed. Low-lying portions of Oil City were buried under flood waters, and flames swept through entire sections of the city.

Many of the older residents of the city today were among those who aided in rescuing marooned persons and in helping them to flee to the hills and safety. Some residents can vividly recall seeing their homes destroyed by the surging flames which spread through Oil Creek Valley and leaped from the water to practically the top of Hogback Hill.

A combination of emergencies caused the panic and grief of that day fifty years ago. Heavy rains had fallen throughout the month of May, with rainfall recorded throughout the section on twenty-eight days of the month. Streams of the district were swollen beyond their boundaries. Unusually heavy rains during the first four days of June added to the menace.

With water surrounding homes and refineries, oil and naphtha tanks were upset and emptied, and the highly inflammable liquids spread over the surface. Fumes and oil ignited with a series of explosions, and the entire creek valley became suddenly a seething mass of flame.

The fire broke out about 11:45 A. M., and many residents of flooded homes were trapped. A number of volunteers who were aiding in rescuing residents whose homes were flooded to the level of the second floor were thrown in the water by the force of the explosion and perished.

Most of the buildings on Seneca Street north from the post office building to the White Bridge, buildings on Stevens and Standard streets, and many buildings in Third Ward were either totally destroyed or badly damaged by the fire, which caused a loss of more than a million dollars. The direction of the prevailing wind carried much of the flame up over Hogback Hill and kept the fire from spreading to the lower Seneca Street business section. Many buildings of the business section therefore escaped serious damage.

Oil City was without a general hospital at that time, and a temporary hospital was quickly established in a large frame building near the intersection of Duncomb and Seneca streets and just outside of the fire zone. Many volunteers aided in caring for the injured. Even while relief work was still in progress following the fire and flood, a

movement was started to secure funds for the erection of a hospital, and the institution has now become one of the leading hospitals in this part of the State.

Oil City was not the only community which was visited by fire and water on that fateful day. Titusville was one of the hardest hit places in the oil region, and many lives were lost there, and homes were carried away and battered to pieces by the flood waters as they were being consumed by flames.

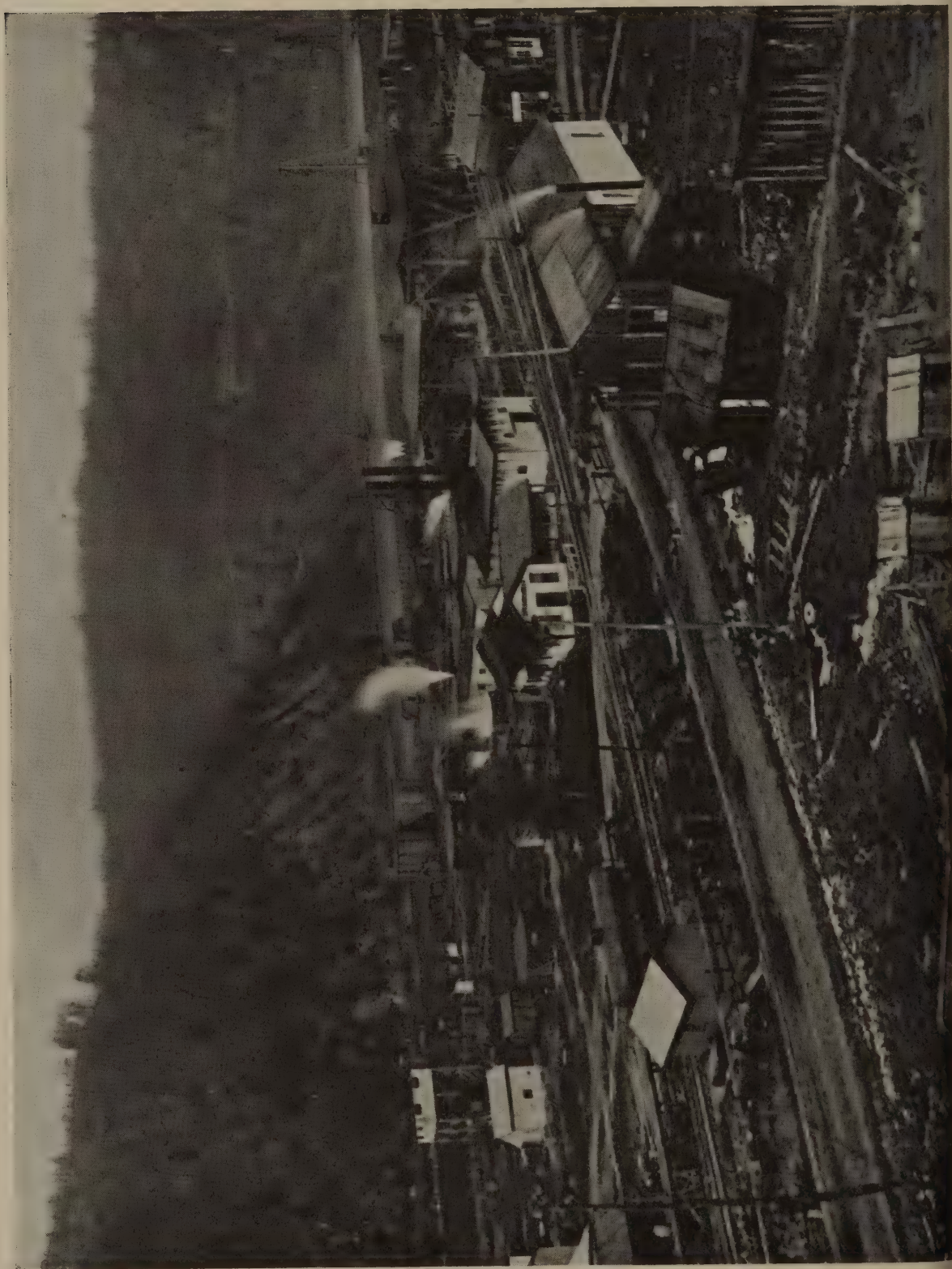
The cause of the holocaust was gasoline. The flood had washed out the foundation of a gasoline tank that stood on the bank of Oil Creek, permitting the contents to escape to the surface of the water. When this had spread, from the tank to the mouth of Oil Creek, the vapor was ignited by coming in contact with the fire in a shifting engine at the Pennsylvania Railroad bridge. With the succession of the explosions the flames had traversed the entire distance to the mouth of the creek, including the streets under water, where men in skiffs were rescuing women and children from second story windows. At Titusville similar scenes were enacted and similar destruction occurred from identical conditions. Both cities were practically cut off from communication with the world outside by destruction of the telegraph offices, until a daring telegrapher climbed a pole outside the fire zone at Oil City, cut in on the wires and flashed out the dread tidings. These two cities of the original oil country rapidly recovered from the disaster and increased their population during the remainder of the decade. But the terrible experience of June 5, 1892, will never be forgotten. Hundreds thought at the time that the judgment day and the end of all things terrestrial had come. The people in the oil regions, generally, were not given to superstitions, but there have always been a few who have regarded the extraction of oil and natural gas from the earth as a sort of sacrilege, believing that these inflammable substances were stored by the Creator for the express purpose of the final destruction of the earth by fire, as foretold in the Book of Revelations. Some others, in the earliest days, believed the enterprising oil men were robbing the globe of the lubricant provided that it might turn smoothly on its axis. But in these modern days these absurdities have few if any advocates. Yet, the horror of that day in Oil City revived the forgotten superstition for the moment. Fire will continue to go with oil and gas to the end of the chapter, as it has from the first, but experience has greatly lessened the destruction and hazard, although nothing can eliminate them.

A Messenger of Death in the Oil Fields—Many lives were lost as the results of the most gruesome accidents occurring in the handling of explosives used in the shooting of wells in the early days of the oil industry, and these fatal accidents still occur from time to time.

It has always been a matter of controversy as to who exploded the first torpedo in an oil well. A patent upon the process was issued to Colonel Edward A. L. Roberts in April, 1865. His military title was acquired by his participation in the Civil War and he claimed that the idea resulted from his observations during the siege of Fredericksburg, when he saw a huge shell explode in a deep water hole and was impressed by the results. He had a brother, Dr. W. B. Roberts, a dentist in New York, with whom he had collaborated in the invention and patenting of a number of dental implements.

The early oil producers had great difficulty on account of the accumulation of paraffin in their wells which coated the walls of the wells and reduced and sometimes shut off the flow of the oil. Various means were resorted to in an effort to overcome this difficulty; steam was used and benzine was introduced to cut the paraffin, but these measures gave only temporary relief. Finally the idea of blasting the wax loose was advanced. An attempt to increase the yield of oil by this method was made by Henry Dennis at Tidioute in 1860. Dennis poured gunpowder into a copper pipe, inserted a fuse, and exploded the charge deep down in the well; the well, however, was dry and continued so following the explosion. In the same year William Reed set off a torpedo in a well near Titusville with favorable results; he also shot several other wells later, but with varied results, and it was evident that the idea had yet to be perfected and Colonel Roberts proved to be the man for this important accomplishment.

Following his army career, Roberts learned about the oil men in northwestern Pennsylvania having trouble in disposing of paraffin which formed in their wells and, recalling the exploding shell he had seen at Fredericksburg, it occurred to him that with such a shell exploded in a well the paraffin could be removed and, at the same time, the well enlarged and the production of oil increased. He made several torpedoes himself, formed a partnership with his brother and, in 1864, made application for a patent. The patent was granted and the Roberts Torpedo Company, destined to create a fortune, was formed. He went to Titusville and was granted permission to make a test at the Ladies' Well, which proved a success, thus solving another of the



Early Oil Refinery, Petroleum Center

problems of the oil producers and providing profit for the man with an idea and the ingenuity to put it to practical use.

It has been stated that no patent in the United States was ever more vigorously contested after issue than this, and under no other were so many suits for infringement brought and successfully enforced. It was proved beyond doubt that Roberts had exploded six torpedoes in oil wells by percussion, in January, 1866, while it was held by the courts that the other applicants for letters patent claimed only to have devised torpedoes that were not successfully exploded. The patent was reissued in 1873, but was strongly resisted and persistently evaded until it expired, a second reissue being defeated by the combined oil producers and the powerful presentation of the case by Attorney James H. Boyce. None but flowing wells are now put to producing without being first torpedoed, except those in the fuel oil districts of Texas and California, where the formations are believed to be too soft to need or to withstand heavy explosions. The first Roberts torpedoes were of powder and later consisted of one or two quarts of nitro-glycerine, later as much as 325 quarts being used, enough to blast about 500,000 cubic yards of earth and rock from a hillside, in condition to be removed by steam shovel.

It is contended that John F. Harper attempted to explode a black powder torpedo in the Raymond well at Franklin in 1860. The can containing the powder collapsed before the electric spark was delivered. Later, however, the Ford well, near Titusville, was successfully exploded with five pounds of powder in an earthen jar, the explosion being produced by dropping a live coal through a string of gas pipe, inserted in the top of the jar. The production of the well was increased. Harper, Skinner and Potter formed a company to continue the business and put in several torpedoes, using glass and earthen jars as containers, but the low price of oil the next year killed the demand for any means to stimulate production. William Reed, who assisted in the futile attempt on the Raymond well at Franklin, invented a modified device, known as the Reed torpedo. He left the oil region a few years after the issue of the Roberts patent, and after his claims had been defeated in court. Frederick Crocker, the well-known Oil Creek producer, and later pioneer in the Bradford field, devised a torpedo in 1864 which was to be exploded by a pistol cartridge inserted in the bottom. The necessary concussion was to be supplied by dropping the torpedo from the top of the hole. Several were used, but sometimes a large amount of fluid in the hole impeded the fall of the shell and there was no explosion. George

Koch, inventor of the skeleton bull wheel, claimed he exploded a torpedo of his own construction in May, 1864. L. H. Smith, later an extensive producer and president of the New York Petroleum Exchange, torpedoed a well of his own at Pithole in 1866. He had the torpedo, of rock powder, made up in New York State and carried it in his hands on railroad trains and stagecoach to Pithole, pretending that it was a roll of maps. It did not help his well much, although it proved his courage and he left Pithole \$20,000 in debt. The greater part of these data were collected by Attorney Boyce for his presentation of the case against the Roberts patent.

After the Roberts patent had been issued and repeatedly upheld by the courts, various other devices were invented to circumvent it. The Roberts torpedoes were exploded by dropping a weight on fulminating caps inserted in the top. W. H. Harper secured a patent on one to be exploded by caps placed at the bottom, whereas the Roberts type had the caps at the top. It was exploded by means of a plunger, passing through an inner tube, which was jerked up forcibly by the line used to lower the shell. One day on Turkey Run in 1875, one of these torpedoes failed to explode. Harper pulled it up, emptied the shell, carried it far from the derrick, moved the plunger to see why it did not work, and an explosion followed. Harper lived nine days with a hole entirely through his lungs, "big enough to insert two fingers in it," to quote Dr. France, the St. Petersburg surgeon who attended him. Another patent was taken out in 1874 by Edward E. Swett, then residing at Mehrtina, in the Clarion County field, but Roberts had him indicted for infringement. At about that time there were many "moonlighters" operating, so called because they frequently put in their torpedoes at night to evade the vigilance of the Roberts agents. The most uncompromising foe of the Roberts monopoly was Alexander Hamar, a native of Hungary, highly educated and a chemist of considerable ability. Mr. Hamar devised a torpedo and used it in 1864 in the Oil Creek region. When the firm of Hamar & Guyer were operating the Jefferson Furnace tract of several hundred acres in Clarion County, Mr. Hamar maintained a nitro-glycerine factory on the premises. He prepared his own compound, torpedoed his own wells and promptly paid the costs of infringement, asserting that "no lard oil glycerine of Roberts" should go in any of his wells. Mr. Hamar was a chief promoter of the Atlantic Pipe Line in opposition to the consolidated United and Empire Pipe lines, and it was his accented English that earned for the project the name "The Dutch Pipe Line."

There were "moonlighters," however, who worked in broad daylight throughout the tenure of the Roberts patents. In June, 1882, one of these had a narrow escape from death while trying to torpedo a well in the village of Allentown, in Allegany County, New York. The well was separated from the town by a roadway and a small stream. The "shooter" had a large number of spectators from the village, who turned out for the spectacle, little realizing what they were to witness. In that field there were two productive strata in the oil sand, and the average shot consisted of two sections of about forty quarts of nitro-glycerine each. The "moonlighter" unloaded a sufficient number of cans from his light spring wagon on the roadway, between the derrick and the stream. In his "Romance of American Petroleum and Gas," published in 1911, the author, A. R. Crum, referring to this incident, says:

"I happened to be walking on the street with Robert W. Dennison, a veteran Roberts torpedo shooter, lately transferred from Edenburg in the Clarion County field. We passed where openings between buildings gave a good view, just as the shooter began lowering the first shell. Mr. Dennison criticised the shooter's carelessness in leaving the team and wagon, the latter still containing two hundred or three hundred pounds of the explosive, so close to the well, and he suggested getting farther away, without loss of time. But we did not move. Obviously the well was about to make a flow. The crowd gathered about it, rushed pell mell into the stream, each trying to outstrip the others in a race for safety. We, on the street, dropped prone on the sidewalk, but with faces turned to the scene of action. The moonlighter leaped from the derrick floor to the heads of his horses, seizing the bridles with no uncertain grip. He meant to have no runaway and no overturning of the deadly wagon, down the bank into the creek. There came a muffled report. A few moments later a column of six-inch casing arose from the well, with frightful rapidity, struck the crown block at the top of the derrick, hurled it aside and continued to rise, full two hundred and fifty feet. It went up as one solid string, but it came down in sections like a shower of pipe. One of these in its swift descent clipped a piece from the metal hub of the right hind wheel of the "moonlighter's" wagon and imbedded itself in the roadway to a depth of three feet; a few fell back upon the

derrick; a majority drove themselves like piles into the earth back of the bull wheel and then the flow of oil hurled itself aloft. The shooter's horses, frightened by the noise, plunged and tried to run, but he held them secure. In three minutes it was all over and everybody safe. One who had fled across the creek through knee deep water, paused to praise the presence of mind of the plucky shooter, who still stood at his horses' heads, to Dennison, busy dusting sidewalk detritus from his clothes. The veteran shooter replied: 'His presence of mind is admirable, indeed, but absence of body is preferable in a situation of that kind.' "

Among the men who followed this dangerous business, exhibitions of rare nerve in the face of danger have not been uncommon. James Hardy Hanks, born near Buffalo in 1855, who died peacefully in Bartlesville, Oklahoma, on July 5, 1910, did a remarkably plucky thing in the Kane field in 1887. Like the moonlighter at Allentown, he was in the act of lowering the torpedo when the well started to flow. The shell was only a hundred feet or so below the mouth of the well when it started up, so the chances were about even whether or not it would be exploded by friction against the casing as oil and gas pushed it along. Hanks realized there was no chance to get away and that if the torpedo should be hurled out of the hole into the derrick or against the walking beam, it would explode, bringing certain death to himself and a number of others. He braced himself where he stood; the shell came up at lively speed; he threw his arms about it and held it firm and steady. The rush of oil followed, nearly drowned the plucky fellow, but he clung to his deadly burden and saved the day. When the flow of oil subsided, he again lowered the shell, reeled up his line, dropped the weight, known in the vernacular as the "go devil," and recorded a successful shot. Hanks afterwards engaged in the manufacture of nitro-glycerine. The device known as the "go devil" was just a heavy weight which was dropped in the well and it rushed downwards, "going like the devil" until it hit and set off the torpedo charges. The force of the explosion generally expelled the "go devil" in a flash, together with mud, rocks, water and pieces of casing.

Joseph Bowers, of Rouseville, Pennsylvania, had one of the most narrow escapes from death on record. He was taking a load of nitro-glycerine in a sleigh to a well near Oil City. On a bad piece of road, of which there were many in the early oil days, the sleigh upset, dump-

ing Mr. Bowers and his load at the horses' feet. He clung to the lines, preventing a runaway, but while he was scrambling to his feet he heard the iron shod hoofs of the horses striking the glycerine cans. But he soon had the team quieted and found the cans so dented that he could not get them back into the square safety box whence they came, in which they had nicely fitted before the overturn of the sleigh. Why the concussion did not cause an explosion no one can tell. Mr. Bowers, however, retired from the torpedo business after that trip. That was not his first narrow escape, miraculous, one might say, but he resolved it should be his last. He had been a "shooter" for a quarter of a century or more.

Very different were the experience and courage of the young man who was engaged to take a load of glycerine from the factory to a magazine near the Allegheny River. He drove half way to his destination, became panic stricken when passing through a piece of woodland, leaped from his seat, unhitched his horses, mounted one of them and rode away from his cargo at top speed, allowing the other horse to follow and leaving the roadway blocked with a most dangerous obstruction, but nothing happened. The owner secured a more courageous driver to go out and deliver the explosive to its destination.

Many poor fellows have been less fortunate in their encounter with one of the most treacherous and destructive liquids ever compounded. The first fatal nitro-glycerine explosion in the oil regions resulted in the death of William Munson in the summer of 1867. He was blown up with his glycerine factory near Reno, Pennsylvania. The second accident was early in the following summer, when the Roberts' Company factory near Titusville blew up, killing Patrick Brophy. Only bits and shreds of human flesh and bone were found in the wreckage. Later in the same year Colonel Davidson and two employees were blown up with Davidson's magazine. In 1869 Dr. Fowler met his fate at a magazine near Franklin. R. Redfield, a torpedo agent at Scrubgrass, on the Allegheny River, below Franklin, hid a partly emptied can in the bushes along the river bank for further use. The can was square, of one gallon capacity, similar to containers used for lard oil, then largely used as a lubricant. The can was found by Mrs. George Fetterman, whose husband had an oil well in the vicinity. Supposing it to be lard oil, Mrs. Fetterman took it to her husband who used it to lubricate his engine for several weeks. One day, when the engine was in rapid motion, Mr. Fetterman applied a few drops to a heating journal from the common oiler. The result-

ing explosion blew off his arm, crushed his skull and otherwise mutilated him. This occurred in the summer of 1870.

In August, 1871, Charles Clarke was blown up while driving with a buggy load of nitro-glycerine, near Enterprise, Warren County. Horses, buggy and man were blown to bits. Very similar were two accidents in 1872. William Thompson, who had been torpedoing wells on Bully Hill, started for the magazine near Franklin with two unused torpedoes. Something caused an explosion while he was driving along the road. A little later, William Pine, driving between Shaw Farm and Rouseville, was blown to atoms by some mishap to his cargo. One of the first persons on the scene and one of the most active in helping to gather the fragments of the victim was James Barnum. A couple of years later Barnum became a shooter in the Clarion County field for the Roberts Company. On February 23, 1876, a bitterly cold day, he transferred three hundred pounds of nitro-glycerine from the factory near Edinburg to his magazine near St. Petersburg. It is believed that, benumbed by cold, he let something drop when he went to open the magazine, which contained about two hundred pounds of the explosive. The concussion was felt five miles from the scene. Others had to perform for poor Barnum the services he had rendered in collecting the remains of his friend Pine, less than four years before, one of his ears being found more than half a mile from the scene.

October 2, 1877, came near ending the career of Colonel Roberts, the torpedo patentee. He had gone with his nephew, Owen Roberts, to inspect a new nitro-glycerine factory on Boliver Run, near Bradford. When the first "run" of the fluid was being made there was an explosion and Josiah T. Smith, in charge of the operation, was killed and Colonel Roberts and his nephew were injured. Had the explosion occurred a minute earlier, both would have been killed, for they had been in a position where they would have received the full force of the concussion.

Only a few of the accidents resulting from the use of nitro-glycerine in the oil fields have been related; to record all would require a volume. They are not so frequent now as formerly. However, on September 19, 1941, this dangerous explosive claimed one life and nearly caused the death of another. J. C. Martin, executive secretary of the Bradford District Pennsylvania Crude Oil Association, and L. L. Streeter, a prominent Bradford oil producer, were en route from Bradford to Oil City by automobile and as they approached a

truck on the highway, which was transporting nitro-glycerine, it exploded, killing Mr. Martin and seriously though not fatally injuring Mr. Streeter.

The annual consumption of nitro-glycerine is now computed in terms of tons, whereas in the early days it was computed in pounds or quarts, but the enormous increase in its use has not been attended by a corresponding increase in fatalities. On the contrary, the casualties have been greatly reduced. It is now manufactured with much care to remove impurities, better containers are used and experience has taught the least explosive temperatures. It has been determined that it is safest to handle at a temperature below sixty degrees Fahrenheit, but above the freezing point. Improved methods of putting in the torpedo when it is likely to flow and throw it back have also been evolved. However, no precautions can relieve the torpedo business of all danger while raw nitro-glycerine is used. In the forms of gun cotton, dynamite and solidified nitro-glycerine, it is far less dangerous, requiring special fulmination or percussion to release its dynamic force, but in those forms it is less effective in producing the desired results. There have always been men courageous enough to engage in the dangerous work and many of these have carried on the work for long periods of years and have shown no sign of fear in doing so. Like men under fire in battle, they forget the danger in time, or become inured to it.

Alfred Bernhard Nobel, the celebrated Swedish chemist, experimented with nitro-glycerine and developed it for practical use. By combining nitro-glycerine, which is produced by mixing glycerine with nitric and sulphuric acids, the resultant product being a pale yellow, rather fluid oil, with an inert substance, he produced dynamite, his most famous invention. Nobel accumulated a large fortune from the manufacture of explosives and from the exploitation of the Baku oil fields. By the terms of his will \$9,000,000 were set aside, from the interest of which the prizes that bear his name were to be paid. These consist of five monetary awards made annually to five men or women who during the year have made preëminent contributions to the cause of world-wide peace, or in the fields of physics, chemistry, literature and medicine. It has been stated that Nobel was shocked by the extensive use of his explosive inventions for war purposes which influenced him in providing for the peace prize. The awards were established following his death in 1896.

THE EARLY DEVELOPMENT OF THE OIL PRODUCING FIELDS; DIFFICULTIES OF TRANSPORTATION; FLUCTUATING PRICES AND MARKETING PROBLEMS; THE RISE AND FALL OF CITIES; FORTUNES QUICKLY ACQUIRED AND QUICKLY LOST.

With the completion of the Drake well came the dawning of the light, whose source had been hidden so long in its rock-bound caverns. The mystery was now to be solved that had in previous years proved incomprehensible. The problem of nature providing every article of utility to man, in practically inexhaustible quantities, was interpreted in unmistakable terms by the tapping of its rich fountains by the drill of the persevering oil miner. The fact, too, was demonstrated, beyond a peradventure, that large reservoirs of oil that had been giving hints of their existence in the springs and upon the streams of Venango County, from the memory of its oldest settlers, and were known to their predecessors, the Indians, so long that the beginning was older than their traditions, existed in the rocks, many feet below the surface of the earth, and could be obtained in what was then thought to be very large quantities, by boring artesian wells of sufficient depth. A wonderful excitement was created all over the land by the striking of this well pumping oil from subterranean deposits, that was in a few short years to become an article so important and indispensable to the wants and uses of mankind. Thousands from all sections of the country came to see the wonderful phenomenon that had been reserved for this, the most enlightened age of the world.

Hundreds secured leases in the different localities, and very soon scores of new oil wells were commenced. Derricks sprang up, as it were, almost by magic, in the valleys and ravines. The treasure that had so long remained dormant, and existed, as was supposed by practical men, only in the minds of the visionary, had budded forth into a reality. At the time of the striking of Drake's well the oil so obtained was selling for about one dollar per gallon. By the investment of a few thousand dollars the operator had before him the chance of securing an ample fortune, not by the slow accumulations of years of toil, but in the course of a few months, and with a comparatively trifling outlay. Never before, in all the history of modern civilization, had a more tempting bait been offered to the cupidity of man.

The machinery used by the first operators was generally of the most primitive character, and the progress made in sinking a well was necessarily slow and the labor tedious. Yet the wells were generally of moderate depth, operators being content with the supply of oil

obtained from the first and second sand-rocks, the average depth being from two hundred to three hundred feet. In a short time a number of wells, yielding a daily average of from ten to fifty barrels each, were struck at various points along the valley of Oil Creek and on the Allegheny River, all of which were pumping wells. The fact of obtaining oil in such quantities in localities so remote from each other, furnished ample evidence of the general distribution of its subterranean reservoirs. Developments were successfully made at Tidioute, at Franklin, and various points along the Allegheny. Spectators thronged all the producing localities and the excitement that soon prevailed was unequalled by any previous mineral discovery, not excepting that of California. During these first years men of abundant wealth were slow to make any investments in a development that came into existence so suddenly. The first operators, with few exceptions, were men of moderate means, relying more upon their industry and skill than upon a lavish expenditure.

Owing to the impetus given by developments, lands around, and even remote from, producing localities, began to appreciate in value. Many of the farmers of Venango County, who had been content in previous years to wrest a bare subsistence from its rugged hills and valleys, were now bewildered at the golden prospects that loomed up before them. Intense as the desire may have been with many to retain the old homestead, which for generations had sheltered their forefathers, and endeared by all the ties of local attachment, the temptation for acquisition of wealth was too great for the large majority. Their farms were purchased by men eager only to obtain the liquid treasures supposed to lie beneath their surface. The derrick and engine house frequently occupied the site of the old homestead; orchards were leveled for firewood, or to make room, and the whole face of the country was in a few years so entirely changed as to be scarcely recognizable by its former owners.

But few of the landowners at first developed the same at their individual expense. They leased to operators wishing to put down wells, the size of the lease ranging from one to ten acres, according to the means of the latter, for a term of years, varying from twenty to ninety-nine, for a certain proportion of all the oil obtained. The portion obtained by the landowner, or land interest, as it was called, was from an eighth to one quarter. The lessee was bound by the terms of the lease, to commence operations in a specified time, and pursue

the same with due diligence, to success or final abandonment. Abandoning the lease worked forfeiture.

When an individual operator secured a lease or leases, and lacked the means to develop the same, he formed a company or association of individuals. These companies consisted frequently of fifty and sometimes more. In such cases the assessment was ten dollars per share for each member at a time. The cost of sinking a well in the early days was about \$1,000, the machinery for boring and pumping costing about \$1,000 more. These companies were not chartered, nor had they any authority by law for holding or chartering real estate, any farther than a simple partnership for the transaction of business. Each individual member of a company was, of course, held responsible for the debts of the whole concern, should the creditor demand it at his hands. In case of failure, those members possessed of means, were selected by the creditors to pay all the debts. The regularly chartered stock companies were of subsequent date, and will be mentioned hereafter.

The number of wells continued to multiply in many portions of Venango County, but more especially along the valley of Oil Creek. The total daily product of all the wells in June, 1860, was estimated at two hundred barrels. From that time the production increased rapidly. By January, 1861, the daily production reached seven hundred barrels, and in the spring of 1861, 1,200 to 1,500 barrels per day.

About this time, as before stated, it occurred to some genius, that the pumping well was a slow and expensive mode of procuring oil from beneath the ground. As the supply seemed to come from great depths below, by reaching the source or fountain, a greater supply could be obtained without increasing the working expenses. To do this, the theorist argued that it was necessary to drill or sink the well to a greater depth. As steam power had been generally introduced, this could be done without material difficulty. The experiment that gave promise of such important results was not very expensive. A well was, accordingly, commenced, and, regardless of the good "show" of oil in the first and second sand-rock, the operator persevered, until the third sand-rock was reached at the depth of between four hundred and five hundred feet. At this depth a cavity, containing gas and oil, was tapped by the drill. This came to the surface with such force as to throw the drilling tools out of the well, far above the top of the derrick. A column of gas and oil followed. The well was tubed, and a continuous stream flowed forth, at the rate of from one thousand to

four thousand barrels per day, and continued to yield at this rate for months. Other parties drilled similar wells in different localities, with similar results. The Burnt Well, on the J. Buchanan Farm; the Phillips Well, on the Tarr Farm; the Empire Well, on the M'Ilhenny Farm; the Sherman, just above, and several others, ranging in daily yield from one thousand to four thousand barrels followed in rapid succession. The production was increased in a very short time from twelve hundred to between eight thousand and ten thousand barrels per day.

The effect of this large production upon the business was, for the time, disastrous. The prices declined to a mere nominal rate, oil selling for as low as ten cents per barrel at the wells, being cheaper than the water peddled in the streets. Thousands of barrels were wasted, being allowed to run into Oil Creek, and no material demand existed for the product, even at the low rates. An incident will illustrate the slight value set upon it by producers. Walter R. Johns, author of "Petrolia," relates the following: "An acquaintance of the writer sold a boat load of oil at ten cents per barrel. The tanks being adjacent to the creek, the boat was run up along side and loaded, in bulk; that is, the oil was run into the open boat, direct from the tanks. The boat had been previously measured. After loading, the buyer complained of the measure, claiming that he lacked ten barrels of the necessary amount. The producer, a great wag, by the way, gave a signal to his workmen, who let a full stream run into the boat, and sunk it." The small pumping wells were forced to cease operations, and scores became disheartened and abandoned their wells.

The production during the winter and spring of 1861 and 1862 has been variously estimated at from twelve thousand to twenty thousand barrels per day. A careful estimate of the entire oil field, made in May, 1862, and published in the "Oil City Register" of that date, gives as the daily production at that time, 5,717 barrels; the number of wells then flowing, seventy-six; the number of wells that had formerly flowed and pumped, sixty-two; sunk, and in process of being drilled, 358; total number of wells 495; amount of oil on hand, 92,450 barrels; amount of oil produced previous to the date mentioned, one million barrels; cost of sinking wells, \$498,000; cost of machinery, buildings, tanks etc., \$500,000.

The production of 1863 was scarcely half that of the beginning of 1862, and that of 1864, still less. In May, 1865, the production had declined to less than four thousand barrels per day; the valley of Oil Creek being the only producing locality at that time. Soon after this

the marvelous developments upon Pithole Creek began to take place.

In the winter of 1864 and 1865 the Frazier Well, at Pithole, the first in that locality, was struck, and flowed, as estimated, January 7, 1865, 650 barrels per day. The striking of this well was the cause of the Pithole excitement, which will ever hold a prominent place in the history of petroleum. Operators thronged to the locality. The Holman and adjoining farms were soon surveyed into suitable lots, and scores of wells were commenced. The results were all that could be desired. A production of from six thousand to seven thousand barrels per day was soon attained. The United States Petroleum Company, of New York, had secured a lease of this and several of the adjoining farms on Pithole Creek, for twenty years, sometime before this.

A city sprang up on the bluff adjoining the producing wells. The town plat of Pithole City commenced May twenty-fourth. November twenty-fifth, six months afterwards, between four hundred and five hundred houses had been erected. Among these were some fifty hotels. The population was in a short time after this, estimated at eight thousand. It had miles of streets, lined with buildings, including banking offices, school houses, churches, an opera house, and other appendages of a first class modern city. Several of its hotels were palatial in size, and truly gorgeous in their equipment. The cost of the Chase House, complete, was over \$80,000; the cost of the Morey and Bonta Houses, or hotels, was equally large.

It was not long before Pithole had a population of fifteen thousand or more. People from every walk of life flocked to the town, oil men, teamsters, laborers, merchants, soldiers just returned from the Civil War, gamblers, speculators, immoral women and tough and reckless men, all the various types that go to make up the typical boom town. With respect to the volume of business, Pithole was third among all the post offices of Pennsylvania, surpassed only by Philadelphia and Pittsburgh.

Sanitary conditions were naturally not good with such a rapid growth; food was expensive and generally not very good; water was a problem and it has been said that water vendors at times sold a barrel of water for more than the price of a barrel of oil. Liquor was always plentiful but much of it poor in quality. The theatre presented the leading plays of that time six nights a week; gambling houses flourished; prize fights, and really good battles, were a frequent diversion; dancing and drinking were indulged in at a music hall and there were a number of social clubs. The leading one of these clubs was the

Swordsman's Club; their motto was R. C. T. and it is said the initials signified Rum, Cards and Tobacco.

In contrast to the usual boom town, crime was not the rule and only one murder occurred. In 1865 William McEntee was shot and found in the street across from the Danforth House, one of the leading hotels. The house from which he staggered enjoyed a questionable reputation and it was claimed that the shooting resulted from a quarrel there. After several days, the murderer gave himself up to the sheriff, and to prevent a lynching by an angry mob, the sheriff took his prisoner to Franklin. He was tried for the crime at Erie and acquitted on grounds of self-defense but the people of Pithole considered it cold-blooded murder. Robbery was frequent and men carried pistols as protection. In January, 1866, the post office was robbed, but the assistant postmaster returned to the office late at night on some mission and discovered the mail bags missing. A posse was organized and the thieves tracked about a half mile; two were captured and four escaped, but the mail, which contained considerable money and valuable papers, was saved.

Twenty-four thousand dollars was given for the privilege of drilling a well on a half acre adjacent to the United States Well, the royalty being one-half of the oil. Strange to relate, the purchaser made a good profit on his investment by selling it again. After being resold a number of times, the lease was abandoned, nothing but the erection of a derrick having been done in the way of development. Sanguine operators located it as the great oil center, and thought they had here found the main source of petroleum supply. Fortunes were made and lost rapidly in the wild speculation that followed.

Solitary horsemen, and horsemen in groups, were met on all the roads leading to Pithole. Pilgrims came from every land seeking fortune. Wagons, loaded with every conceivable article, household furniture, dry goods and groceries, engines and well machinery, blocked the roads. Pedestrians plodded steadily through mud and mire. Bearded horsemen, water-proof externally, so far as rubber garments and high-topped boots could make them, floundered through the almost unfathomable depths of Holmden Street, then the main thoroughfare of the magic city of petroleum. A great scarcity of females at first prevailed. The residents soon brought on their families, and began to live more in accordance with the ideas of modern civilization. "Interests for Sale," stared one in the face from almost every house front, and crowds of eager looking men, of every degree and profession, thronged the hotels, saloons, and the sidewalks. Like Tadmor,

and other ancient cities of note, after a brief season of unequalled splendor, so far as hopes for its future were concerned, Pithole began to show signs of decay. The production of oil decreased to a mere nominal figure; fire swept away whole streets of the town. A general collapse took place and in 1866 but a few people remained, thus indicating how quickly, impelled by popular excitement, a town may rise and fall. Parts of some of the buildings, including the Chase House, were removed to the then new oil field of Pleasantville where today there is an attractive small town, with modern homes, a bank, stores, churches, a modern school building and the conveniences of present day urban life. The city of Pithole had a short life but will always be remembered in connection with the early days of petroleum in our land as giving to man between three and four million gallons of crude oil in less than two years.

This and the discovery of new oil fields at Benninghoff Run and the Stevenson Farm increased the daily production to an average from ten thousand to twelve thousand barrels.

The excitement caused by the first wells struck was but slightly diminished by the decline in prices and other unfavorable causes. Each succeeding year brought new operators, eager to invest their capital and skill in the venture, and likewise, each year a new field was found more promising than the preceding ones.

Commencing at Titusville in 1859, the tide of development swept over the valley of Oil Creek, and along the Allegheny River, above and below Oil City, for a considerable distance. Cherry Run, in 1864, furnished the first subsequent excitement. Then came Pithole Creek. Benninghoff and Pioneer Run, the Woods and Stevenson farms, on Oil Creek, near Petroleum Center, came, in like succession, in 1865 and 1866. Tidioute, or rather Dennis Run and Triumph Hill, was a prominent candidate for public favor in 1867, and in the latter part of the same year, Shamburgh, on Upper Cherry Run, made its début. And so the development progressed, each year furnishing a new extent of territory drilled over.

The exodus of skilled operators from the older oil fields to the new ones, caused a perceptible decrease in the production of the former. The production of the new fields, consequently, did not more than maintain the daily average. Hence, with the new fields of Shamburgh and Pleasantville, each of which reported a daily production of over two thousand barrels, the daily average for 1868 was little more than twelve thousand barrels. Each month of 1868 showed an average of three hundred new wells in process of drilling. Naturally, the produc-

tion was regulated to a material extent by the prevailing prices and the increase in consumption which regulates the whole. The prices had, of course, exercised a ruling influence upon the extent of development of each year. A statement of these and their effects, will give the reader a clearer conception of the business in all its different bearings.

The first oil, obtained from the well of the Pennsylvania Rock Oil Company, in 1859, sold at fifty cents per gallon. By July, 1860, the price at the wells had declined to seven cents per gallon. In October, it was ten cents per gallon. It advanced steadily until January 1, 1861, when it reached twenty-five cents per gallon. It continued at about that figure until toward the end of February. On March first it was fifteen cents; on March eighteenth, ten cents per gallon. The decline continued with the increasing supply, until just before the discovery of the large flowing wells. In the summer the price had fallen to five cents per gallon or two dollars per barrel. The sudden and immense increase of the production almost entirely destroyed its value. Thousands of barrels were allowed to run to waste, and the sales made in August and September were as low as fifty, thirty and twenty-five cents per barrel, some sales, during July, being made at ten cents per barrel. Sales were made at forty cents per barrel, in October, November and December, and some sales at thirty-five cents per barrel. In January, 1862, the price had advanced to five cents per gallon.

Nearly all these purchases proved unprofitable. The great flood of oil reduced the price at the seaboard to nine cents per gallon in May, 1862, causing a loss to the seller of the first cost of the oil, and from one to two dollars per barrel in addition.

The lack of demand in the home market caused the enterprising merchants who had ventured in the trade, to seek in Europe for new fields for its consumption. The first shipments abroad were made in October, 1861. The exports for that year were 1,112,476 gallons, or 27,812 barrels. When this flood reached the European ports in the summer of 1862, the same destruction of values took place that had occurred in this country. Parties who had bought in New York, at nominal prices, suffered heavy losses. But the article had been forced upon public attention; and, although for a time, the markets were overstocked, the way was opened for future and increasing demand.

The suspension of specie payments in the spring of 1862, and the subsequent rapid advance in the price of gold, greatly contributed to reanimate the oil business, speculation revived, and, in October, the price was carried as high in New York as fifty cents per gallon. By December it had receded to twenty-five cents per gallon. During the

year 1863, it ranged between eighteen and twenty-five cents. In 1864 the advance in price was rapid, from twenty-nine and a quarter cents in January, to fifty-six cents per gallon in July. It continued high with some fluctuations until January, 1865, when crude was selling at forty-nine to fifty cents. The advance in the price of gold and exchange, which began in the spring of 1862, and continued until it reached its maximum in the summer and fall of 1864, soon carried up prices to a point at which the oil would pay all expenses of transportation, and give the producer a profit of from three to seven dollars, and at one time even ten dollars, per barrel at the wells. This soon stimulated development. Wells that a few months before were unprofitable, owing to the preceding low prices, became of immense value.

Speculation in oil lands, and the organization of stock companies, under the laws of the different states, followed to an enormous extent. Lands were bought at high prices, and resold again at advanced rates, or were revalued by the holders at an immense advance, and used by them in the formation of stock companies, by means of which the stock was sold wherever the spirit of speculation had been sufficiently excited by flaming prospectuses, newspaper reports of sudden fortunes made by the operators, or other means used for the purpose. Many of these companies were fraudulent, but the majority, probably, were honestly organized, and conducted with integrity. The capital stock of these companies, over one thousand in number, as stated in their prospectuses, was approximately \$600,000,000.

The amount of capital thus withdrawn from other pursuits, or from the savings of the community, and applied to the purchase and development of oil land, cannot be accurately estimated, but is supposed to have exceeded \$100,000,000.

The speculation was at its greatest height when the rebellion was brought to a sudden close and the national currency was restored to something like its true value which, under the apprehension of the failure of the Union, had depreciated as low as forty cents on the dollar. Gold, which compared with the currency, had been worth over 250 per cent., and even as high as 285, declined to 130. The returns from the shipments of petroleum and the currency price at home, were reduced to a great extent, and as the cost of transportation and other expenses continued with but little change, the effect was again disastrous upon the business. The great flood of March, 1865, destroyed a large amount of oil and other property, numbers of wells, and reduced the production. The war tax, of one dollar per barrel, which went into effect in April, 1865, still further depressed the business and

disheartened those engaged in it. The exposure of the fraudulent nature and worthlessness of many of the oil companies added to the depression.

In the meantime, prices began to advance abroad, owing to a large increase of the consumption, a generally increased demand, and diminished supply. A large number of wells were sunk by the companies organized the fall and winter previous. Although most of these proved unprofitable, owing to various causes, chief among which was the lack of experience on the part of those entrusted with their management, or insufficiency of means, some few were highly profitable.

The total production of petroleum for the year 1865 was estimated at 2,830,000 barrels crude, which, added to the stock on hand, January 1, 1865, was equivalent to 2,312,000 barrels of refined, of which the home consumption was 839,000 barrels, the exports, 677,000 barrels, and the leakage, 154,840 barrels, leaving a stock on hand, January 1, 1866, of about 640,000 barrels refined. The average price per barrel of crude on Oil Creek, is given as follows:

Currency	Gold Equivalent
1862—\$1.15.....	\$1.02
1863— 3.25.....	2.24
1864— 8.13.....	4.00
1865— 6.71.....	4.27

The following is quoted from a carefully prepared report respecting the course of the trade during 1865, made at the close of that year:

"The production was exceedingly light until summer, in consequence of accidental causes. These being removed, a steady increase was gained later, which carried the daily yield to a full average of any of the previous years. Nevertheless, the supply in our markets was inadequate throughout; during the first half of the year, on account of the light production; later, because there were no facilities to forward the quantities gained from the new oil fields, except at an expense too high to be generally incurred. The demand for home consumption was steady and increasing; for export, very light during the first five months (the shipments for 1864 having been excessive), but later, large and too heavy for the limited supply on our markets. The value of the article was steady during the first part of the year, later, continually advancing, and during

the last months it was sustained at a height which had in previous years been but occasionally reached by speculative movements. The average value of the article during 1865 was about twenty per cent higher than in 1864, although our paper currency appreciated on an average about twenty-nine per cent as against 1864.

"After the production has, during 1865, been above twenty per cent larger than in 1864, while the demand for the article has increased about twenty-five per cent, we have now ample stocks left in the country, and if the yield of the wells continues large, the supply will, therefore, probably be for the current year, plentiful if not excessive, and a reduction of our present exceptional prices necessary. Under these circumstances it is more to be regretted that the cost of producing and forwarding the oil is now very high, far above the rate at which we will in future be able to export our over supply."

The above sets forth some of the principal reasons for the falling off in prices in 1866. The daily production for the fall and winter of 1865 and 1866 was estimated at about twelve thousand barrels. By May, 1866, this production had fallen off about one-third. This falling off was mainly attributed to the rapid decrease of the production of the Pithole oil field.

Prices ruled steady for 1866, ranging, for the average, from four to seven dollars per barrel. The development was considerable, owing to the efforts made by the numerous oil companies to develop their lands.

The impetus given the trade during the previous years of 1864 and 1865 carried it through a greater portion of 1866, notwithstanding the many premonitions of a general collapse. Early in May, 1866, the government tax on crude was repealed, but the abatement of the tax failed to induce higher prices. The bursting of the oil bubble was imminent. One company after another failed to meet the expectations of sanguine stockholders. The prices, however, were remunerative.

Considerable anxiety was manifested by holders of all kinds of property to realize on the same. As a consequence, a rapid reduction of the values of the two preceding years took place. A flood in the spring, a number of very destructive conflagrations in various parts of the oil region, amounting in all to a loss equivalent to from \$4,000,000 to \$5,000,000, expedited the general collapse. The oil companies fell, in the fall and winter of 1866 and 1867, one after another, like a row

of bricks. Thousands who had purchased the stocks were overwhelmed in the ruin that followed. Its reaction upon the oil region itself was terrible; all classes were affected by it.

The construction of the Oil City & Pithole Railroad, from Oil City to Pithole, a distance of about fifteen miles, along the Allegheny River, the Reno & Oil Creek Railroad, from Reno to the upper end of Cherry Run, crossing the valley of Oil Creek at Rouseville, and the extension of the Meadville Branch of the Atlantic & Great Western Railway from Franklin to Oil City, were among the notable events of 1866. The completion of these roads, and extending of the Oil Creek Railroad, with its important connections at Corry, down the valley of Oil Creek to Shaffer, and the laying of a number of oil pipes for transportation of the oil from the wells to the various shipping points, changed the entire mode of transportation. Thousands of teamsters and boatmen were thrown out of employment. These classes constituted a large element of the consuming part of the general population, and all branches of domestic trade dependent thereon, were rendered unprofitable and speedily abated. The transportation of oil from the wells to the various shipping points was dependent chiefly upon teams in former years, while the Allegheny River furnished the main outlet for the product to Pittsburgh, the principal oil market. The average load of oil to each team was from five to seven barrels, the weight of a barrel of oil being about 360 pounds. The cost of transportation by this mode was from one dollar and fifty cents to three dollars and fifty cents per barrel, according to distance. In some cases higher rates were paid. The introduction of more reliable, cheaper and rapid transportation sensibly affected prices, but this was more than compensated by placing the general trade upon a more permanent basis.

The year 1867 was one of general depression and low prices. Thousands of acres of the lands of defunct oil companies, and scores of engines, as well as a vast amount of machinery, were sold by the sheriff of Venango County for debt and taxes. A general thinning out of superintendents, operators, and business men, from all the principal localities took place. Pithole with its numerous hotels, vast expectations and large productions, which had shown visible signs of decay in 1866, vanished into thin air. Other magnificent embryo cities followed, or, rather, had preceded it. Oil was sold at the wells as low as one dollar and twenty-five cents per barrel, and the highest price attained during the year was four dollars and eighty-five cents per barrel. The price of refined was reduced in like ratio. The low price

induced the building of iron tanks, at Oil City and other shipping points, of a capacity from six thousand to fifteen thousand barrels, for the storing of the oil. The amount of iron tankage thus constructed reached over one million barrels in 1868, fully half of which was at Oil City.

The building of the Farmers' Railroad from Oil City to Petroleum Center, a distance of seven miles, along the valley of Oil Creek, connecting at Petroleum Center with the Oil Creek Railroad, early in the season, afforded cheap transportation to Oil City. At this point connections were made with the Atlantic & Great Western Railway, and with the Warren & Franklin, which company had obtained possession of the Oil City & Pithole Railroad, forming connection at Irvineton, their terminus, with the Philadelphia & Erie Railroad, and affording abundant transportation to all the principal points, east and west.

The Allegheny Valley Railroad, now a division of the Pennsylvania Railroad, the construction of which had been commenced at the beginning of 1867, was finally completed to Oil City during the winter of 1867 and 1868. This road, extending from Pittsburgh to Oil City, following the course of the Allegheny River for the entire distance, completed the railway circle, by furnishing connection with the only required outlet. Late in the season, the Warren & Franklin Railroad obtained control, by lease and purchase, of the Farmers' Railroad, and consolidated it with their own, and commenced to run shortly afterward over the Oil Creek Railroad to Corry, connecting with the Philadelphia & Erie at that place, thus forming a complete circle of railway through the most productive portions of the oil region.

The sacrifices made in the sale of property by the sheriff during 1867, and the winter of 1868, were very great. Engines, the first cost of which was from \$2,500 to \$3,000, sold as low as \$25 and \$50 each. Other machinery and even the lands, were sold at similar rates, in proportion to their first cost.

The new oil field at Dennis Run, adjacent to Tidioute, which at its maximum reached a production of from two thousand to three thousand barrels per day, increased, or, rather kept up the aggregate production to a fair figure, while the low prices stimulated consumption and export.

The cheap rates at which engines and other machinery for oil wells, as well as skilled labor could be obtained, invited a large amount of capital, and preparations were made for extensive development in 1868. The prices ruling during 1867, owing to the greatly reduced rates of transportation, enabled oil producers to weather the storm,

while those engaged in business, established on a legitimate basis, by the adoption of a system of rigid economy, managed to get through the season without serious loss. The reaction, and the consequent reduction of former values to their real worth, were serious matters to many, but upon the ruins of the exploded oil bubble the business was being built up on a permanent basis.

At the commencement of 1868 prices ruled quiet at \$2.70 to \$2.80 per barrel, closing for the month firm at \$2.00 to \$2.15. The market appreciated steadily during the subsequent months until June. At the commencement of that month there was a material advance, and prices reached \$4.50, and at the close of the upward movement, \$4.90 to \$5.00. The highest figures attained during the month on the Creek were \$4.90 to \$5.25, and at Oil City, \$5.00 to \$5.25. During the balance of the year, prices alternated between \$3.75 and \$4.90 per barrel, and occasionally reached \$5.00 to \$5.10. Owing to the improved means of transportation, and cheaper rates of machinery, labor, and the uniform successes of the general development, the local business for the year 1868, the first upon the new basis, proved a prosperous one. All classes engaged in the trade reaped an ample share of the rich harvest. The foreign demand for export and the home consumption required about the entire product, the stock on hand January 1, 1869, being scarcely five hundred thousand barrels.

Geological and Physical Features of the Oil Region—A geological survey of the oil region, made by Professor Rogers, which was made previous to the discovery of petroleum, this being a State survey and a partial survey of Oil Creek several years later by Professor Ridgway, appears to have formed the basis for the abstract report which was later published as follows:

"The geological strata of Oil Creek and vicinity has been described by eminent geologists to consist of conglomerates, slates, and shales.

"Conglomerate rock is made up of pebbles, mixed with more or less sand, and all cemented into a close, hard rock. These pebbles vary in size and quality in various localities, being usually of quartz, though sometimes of sandstone; and they are found from the size of a pea to that of a goose-egg, and occasionally even, though not in our portion of the state, with a diameter measuring four to five inches. They have evidently been formed into the shape in which we now find them by the action of the water tumbling, pushing, and rolling

them together, and sweeping them along, by which the sharp angles they must have had when first torn from their native bed, have been broken and worn away by attrition, until they present the well known smooth and rounded form, which so distinctly characterizes them.

"The conglomerates of this vicinity belong to what is called the vespertine formation in the Pennsylvania Survey. It is found *in situ*, or in its native bed, only upon the tops of the highest hills, but pieces of it, which have been broken off by their own weight, after the softer rock beneath had been decomposed and washed away, are found scattered over the hillsides, sometimes in immense masses or blocks, which are so enduring as to defy the action of the elements, and bear record in their ruins of the former conditions and changes which their more yielding neighbors, the sandstones and slates could not survive.

"As found here it is not coarse, the pebbles being rarely larger than hickory nuts; and they become smaller as we trace this formation westward, while the opposite will hold good if we go eastward. The accompanying vespertine sandstones and slates also become finer in their textures, and the whole formation becomes thinner as it spreads westward from 2,600 feet on the Susquehanna River to not over 100 to 150 feet on Oil Creek.

"From this thinning down of the mass towards the west, and a corresponding change in the texture, from coarse to fine, we are led to believe that the materials from which the rocks of this formation are composed, were derived from a continent lying on the east or northeast of the Appalachian range, previous to their upheaval; and that these materials, after being brought down to the sea through the channels of rivers flowing west or southwest, were distributed to their present location by the powerful ocean currents that were subject, doubtless, to laws similar to these which govern our present great rivers of the sea.

"For a familiar illustration take a long mill-pond or a lake with a creek flowing into it at one extremity and out at the opposite—the creek will bring down, especially at the time of a flood, large quantities of loose stones, pebbles, sand, black mud, or vegetable mould, and blue mud or clay; and it will dispose them over the bottom of the pond or lake in the order

in which we have named them; that is, at the upper end of the lake, at the mouth of the creek, will be found the large stones, then the smaller ones or pebbles, then, as the current becomes less, the black mud was deposited, and finally, the blue clay, which the water held longest, and carried farthest; and the beds will be found to become thinner as they become finer in texture, thus corresponding to the conglomerates, sandstones, slates, and shales of the New York state and Pennsylvania formations of the secondary series.

"It will be readily inferred from the above, that a sandstone is only a very fine conglomerate; also that black carbonaceous slates may be attributed to vegetable origin; and that argillaceous shales or the soap-stones of the Oil regions, are derived from clayey formations.

"The vergent series of rocks, so-called by Professor Rogers, is immediately below the vespertine, and it corresponds to the Chemung and Portage groups of the New York State geologists. This formation consists of sandstones, slates and shales, interspersed with the sandstones in their layers, varying from five to fifty feet in thickness, while the slates and shales are found in immense deposits, sometimes 800 or 1,000 feet in thickness. To this series, doubtless, belong the sandstones, slates and shales which appear in the bluffs along the valley of Oil Creek, throughout its entire length; also the first, second and third sandrocks of the wells, with their intervening slates and shales, as far as the drill has yet penetrated, and how much deeper it extends is unknown. It is not improbable the fourth sandrock of Pithole corresponds to the third of Oil Creek, and, in fact, the later developments, where the third sandrock has been found at the depth of 750 to 900 feet, in localities adjacent, proves this, as well as that the first at Pithole is identical with the one found above the bottoms along the bluffs of our valleys; although it is by no means impossible that the continuity does not exist, for the reason that there may have been causes operating at the time when these rocks were deposited, which produced local changes and variations of greater or less importance. A third sandrock is found on Church Run, while no trace of one is found on the flats around Titusville, even at the depth of 1,200 feet; and the third sand, or great oil bearing rock of the valley of Oil Creek, disappears at the upper end of the Foster farm, and we have

not learned that any has been found in any portion of the valley above."

The rocks above described are stated to belong to the paleozoic rocks, because containing the most ancient remains of ancient animal and vegetable life yet discovered, stretching all the way between the gneissic formations beneath and the lowest of the coal deposits above. Sometimes they are denominated "fossiliferous," "sedimentary," or "secondary" rocks.

"In Pennsylvania," says Professor Rogers, "this class has been deposited during all the four earliest periods of the great European divisions, namely, the Cambrian, the Silurian, the Devonian and the Carboniferous. No traces of the fifth, or Permian group, have as yet been discovered in North America. . . . The prolonged succession of sedimentary action ceased with the close of the Cambrian system, being terminated by the upheaval of the ocean, in whose broad bed and around whose margin these deposits had collected."

The same eminent authority states that the vergent series abounds in the remains of marine vegetation, and also, that the aggregate thickness of all the rocks belonging to the classes above described, measured at their greatest depths, is not less than *thirty-five thousand feet*.

Walter R. Johns, in his interesting volume "Petrolia," says:

"Those of our readers who are fearful that the several sandrocks of today may eventually become exhausted of their deposit, can surely take courage from this last statement, for it is possible that oil-bearing sandrocks may exist at intervals for this entire distance. Improved machinery and a cable of length and weight will be required in such wells. What language would be adequate to describe the feeling of reverential awe that would fill the frame of the oil miner of some future period, as he commenced to 'sand-pump' from the last one of this series at the above mentioned depth?"

There is nothing very remarkable about the physical features of the oil region. The most productive portion has been aptly described as in the shape of an irregular quadrangle, each of its sides being from twenty to thirty miles in length, the axial line nearly corresponding with the course of Oil Creek. Subsequent developments changed this to nearly an oblong square. The general face of the country is rugged and hilly. As far as early developments extended, operations

were confined to the valleys of Oil Creek and the Allegheny River, and a portion of its northeastern slope. The Allegheny is the principal stream, and flows nearly through the center of Venango County, but from the peculiar structure of the land, it runs toward every point of the compass in its course. According to Eaton, Franklin is elevated about 750 feet above Pittsburgh, so that there is a fall in the Allegheny of five and a third feet to the mile. From Franklin to Meadville, about thirty miles by the course of French Creek, there is an ascent of 130 feet, or four and a third feet, on an average, to the mile.

Oil Creek, from Oil City to Titusville, a distance of about seventeen miles, is estimated to have a fall somewhat greater than French Creek.

The main producing portion was an elevated table land, sloping toward the lakes and Allegheny River, with the summit at or about Pleasantville—the hills become higher in descending the valley of Oil Creek, from 150 feet in height just below Titusville to 450 to 500 feet at Oil City. The approaches to the Allegheny River from Meadville to Franklin, consist of a grade, or downward slope. Starting from a nearly level country, the same phenomena are perceptible as along the valley of Oil Creek, heights gradually increasing in altitude until the objective point, the Allegheny is reached.

The principal streams are the Allegheny River; French Creek, which enters the Allegheny River at Franklin; Oil Creek entering the Allegheny at Oil City, seven miles above Franklin. Besides these are numerous other small streams. The tributaries of French Creek are Patchell's Run, Sugar Creek, Mill Creek and Deer Creek. The tributaries of Oil Creek are Cherry Run, Cherry Tree Run, and Cornplanter Run. Pithole Creek is sixteen miles above Franklin; Hemlock, twenty-one miles; Horse Creek, eleven miles; Tionesta, thirty miles. Above these are East, West and Little Hickory. Two Mile Run is two miles above Franklin. Below Franklin, are East Sandy, Big Sandy, and Scrubgrass.

Abundance of good water prevails. Springs gush forth from the hillsides, and even from the tops of the highest hills. The proportion of good farming land is small, the general surface of the country being unfavorable for extensive agricultural operations.

Venango County was taken from Allegheny and Lycoming counties, by an Act of Assembly, passed March 12, 1800, and organized for

judicial purposes by Act of April 1, 1805. In 1839 its proportions were somewhat lessened by the organization of Clarion County from a portion of its eastern territory, and still later by the addition of a portion of its northern territory to the new county of Forest. The county now forms an irregular figure with many angles; and contains about eight hundred square miles. The population in 1800 was 1,130; in 1810, 3,060; in 1820, 4,915; in 1830, 9,470; in 1840, 17,900; in 1850, 18,310; in 1860, 25,044. The present population is approximately 64,000.

The climate is in the highest degree healthy, although the seasons are somewhat irregular. The general humidity of the atmosphere from the heavy spring and fall rains has not been conducive, to any material extent, to rheumatic and pulmonary complaints. Typhoid fever, in the early days, occurred to some extent during some seasons, cases usually being of a mild character and now, as throughout the State generally, the incidence of this disease is rare.

To the city resident, the pure mountain air of the oil region was found to be invigorating. Many who came here in impaired health, after a comparatively short residence, attained greatly improved health and vigor. The health of those engaged around the oil wells and fields was noticeably good. The degrees of cold and heat are similar in most general respects, to that of elevated table lands in all portions of the world.

Discovery of Nature's Natural Lubricant; Its Adaptation to Railroad Lubrication—The second oil well in Pennsylvania caused excitement equal to that which followed the completion of the Drake well and revealed the presence of a natural product of great value, the characteristics of which have never been matched anywhere else in the entire world.

The following is quoted from McLaurin's "Sketches in Crude Oil":

"Cheap and abundant light the island well on Oil Creek assured the nations sitting in darkness. If there are 'tongues in trees' and 'sermons in stones' the trickling stream of greenish liquid murmured: 'Bring on your lamps—we can fill them.' The second oil well in Pennsylvania, eighteen miles from Col. Drake's, changed the strain to: 'Bring on your wheels—we can grease them.' America was to be the world's illuminator and lubricator—not merely to dispel gloom and chase hobgoblins, but to increase the power of machinery by

decreasing the impediments to easy motion. Friction has cost enough for extra wear and stoppages and breakages 'to buy every darkey forty acres and a mule.' The first coal-oil for sale in this country was manufactured at Waltham, Massachusetts, in 1852, by Luther Atwood, who called it 'Coup Oil,' from the recent *coup* of Louis Napoleon. Although highly esteemed as a lubricator, its offensive odor and poor quality would render it unmerchantable to-day. Samuel Downer's hydro-carbon oils in 1856 were marked improvements, yet they would cut a sorry figure beside the unrivaled lubricant produced from the wells at Franklin, the county-seat of Venango. It is a coincidence that the petroleum era should have introduced light and lubrication almost simultaneously, one on Oil Creek, the other on French Creek, and both in a region comparatively isolated. 'Misfortunes never come singly,' said the astounded father of twins, in a paroxysm of bewilderment, but happily blessings often come treading closely on each other's heels."

Pleasantly situated on French Creek and the Allegheny River, Franklin is an interesting town, with a history dating from the middle of the eighteenth century. John Frazier, a gunsmith, occupied a hut and traded with the Indians in 1747. Four forts, one French, one British and two American, were erected in 1753, 1760, 1787 and 1796. Captain Joncaire commanded the French forces. George Washington, then a British lieutenant, who entertained no thought of ever being recorded in history as the "Father of his Country," visited the spot in 1753, the year the French built Fort Machault. At that time Washington was on his mission to the French as the representative of Governor Dinwiddie and he stopped at the log cabin of John Frazier.

Franklin was located on lands belonging to the State. The Act of March 24, 1789, of the General Assembly declared that not exceeding three thousand acres should be surveyed at the fort of Venango for the use of the Commonwealth. By Act of April 18, 1795, commissioners were appointed to survey one thousand acres of the reservation and lay off the town of Franklin. General William Irvine and Andrew Ellicott were in charge of this work. The town was created a borough in 1829 and a city in 1869, deriving its chief importance from petroleum. At the time of Washington's visit, the northwest was a wilderness and Pittsburgh had not been laid out.

On the south bank of French Creek, at Twelfth and Otter streets, James Evans, blacksmith, had lived twenty years. A baby when his parents settled farther up in 1802, he removed to Franklin in 1839. His house stood near the "spring" from which Hulings and Whitman wrung out the viscid scum. In dry weather the well he dug seventeen feet for water smelled and tasted of petroleum. Tidings of Drake's success set the blacksmith to thinking. Drake had bored into the well close to the "spring" and found oil. Why not try the experiment at Franklin? Evans had little money, but a hardware dealer trusted him for the iron and he hammered out rough drilling tools. He and his son Henry rigged a spring-pole and bounced the drill in the water well. At seventy-two feet a crevice was encountered. The tools dropped, breaking off a fragment of iron, which obstinately refused to be fished out. Pumping by hand would determine whether or not any favorable results would be obtained. Two men pumped vigorously and a stream of dark green fluid gushed forth at the rate of twenty-five barrels a day. It was heavy oil, about thirty degrees gravity, free from grit and smooth as silk. The greatest lubricant on earth had been discovered.

Imagine the excitement that followed. McLaurin says:

"Franklin had no such convulsion since the 'William B. Duncan,' the first steamboat, landed one Sunday evening in January, 1828. The villagers all rushed to the well. November court adjourned; Judge John S. McCalmont, whose able opinions were upheld by the Supreme Court, decided there was ample cause for action. A doctor rushed to the scene, hatless, coatless and shoeless. Women deserted their household work without the usual preparation for street appearance. Bells rang and two horses ran away. It has been related that at prayer meeting a ruling elder, whom the events of the day had wrought to fever heat, raised a hilarious snicker by imploring God to 'send a shower of blessings—yea, Lord, twenty-five barrels of blessings!' It was really a great day, for twenty-five barrels a day of thirty dollar oil was something to become excited about."

That night a young lawyer called at the Evans home. Miss Anna, one of the daughters of the house, greeted him at the door and said jokingly: "Dad's struck ile!" The expression was taken up by the town and made a hit. It spread far and wide and was printed everywhere and became permanent in the vernacular of petroleum.

The young lady married Miles Smith, a furniture dealer. In 1875 Mr. Smith revisited his native England, after many years' absence; meeting a party of gentlemen at a friend's house, the conversation turned upon Pennsylvania. "May I awsk, Mr. Smith," a Londoner inquired, "if you hever 'eard in your 'ome about 'dad's stwuck ile.' I wead it in the papahs, doncherknow, but I fawncied it nevah weally appeahed." Mr. Smith had heard it and informed the company to that effect as well as the fact that he married the girl who was responsible for the expression.

Sufficient oil to pay for an engine was soon pumped. Steam power increased the yield to seventy barrels. Franklin became the place of interest for traders, dealers, speculators and investors. Frederick Prentice, a leader in enterprises, offered forty thousand dollars for the well and lot. Evans rejected the offer and kept the well, which declined to ten or twelve barrels within six months. The price of oil declined, but the lucky Evans realized a nice competence. He enjoyed his good fortune some years before passing to the great beyond. Mrs. Evans long survived, dying at the age of eighty-six. The son removed to Kansas, three daughters died and one still resided in Franklin for many years. The old well experienced its complement of fluctuations. Mosely & Company, of Philadelphia, leased it. It stood idle, the engine was taken away, the rig tumbled and the hole filled up partially with dirt and wreckage. Prices advanced and the well was hitched to a pumping rig operating others around it. Captain S. A. Hull ran a group of the wells on the flats and a dozen three miles down the Allegheny. He died in 1893, resulting in the dismantling of most of these wells, hardly a vestige remaining to tell that the Evans and its neighbors ever existed.

James Evans was not alone in the search for the precious fluid. Companies were organized while he was removing the tools from his well. The Franklin Oil & Mining Company started work on October fifth, twenty rods below Evans, finding oil at 240 feet on January 12, 1860. The well pumped about one-half as much as the Evans for several months, but its production continued. The forty-two shares of stock advanced tenfold in one week, selling at a thousand dollars each. Three or four wells were put down, the company dissolving and members operating individually. It was well officered, with Arnold Plumer as president; J. P. Hoover vice-president; Aaron W. Raymond secretary; James Bleakley, Robert Lamberton, R. A. Brashear, J. L. Hanna and Thomas Hoge executive committee. Mr. Plumer was a dominant factor in Democratic politics, largely

instrumental in the nomination of James Buchanan for President, twice a member of Congress, twice State Treasurer, Canal Commissioner and founder of the First National Bank. At his death, in 1869, he devised to his family the largest estate in Venango County. Judge Lamberton opened the first bank in the oil regions, owned hundreds of houses and in 1885 bequeathed to each of his eight children a handsome fortune. Colonel Bleakley rose by his own exertions, keen foresight and skillful management. He invested in productive realty, drilled scores of wells around Franklin, built iron tanks and brick blocks, established a bank, held thousands of acres of lands and in 1884 left a very large inheritance to his sons and daughters. Mr. Raymond developed the Raymilton district, for whom it was named, in which hundreds of wells have rewarded Franklin operators, and at eighty-nine was exceedingly active. Mr. Brashear, a civil engineer and worthy citizen died about 1876. Mr. Hanna operated heavily in oil, acquired numerous farms, established a brick works, of which the author's maternal grandfather, William H. Reese, was superintendent, and erected the largest block at that time, which contained the first opera house in the city. Mr. Hoge was an influential politician, elected to the Legislature two terms and was mayor one term.

In February, 1860, Caldwell & Company, a block southeast of Evans, finished a paying well at two hundred feet. The Farmers' & Mechanics' Company, Levi Dodd president, drilled a medium producer at the foot of High Street, on the bank of the creek. Numerous companies and individuals were active in the spring. Holes were sunk in front yards, gardens and water wells. Derricks dotted the landscape thickly. Franklin was the objective point of great crowds of people. The earliest wells were shallow, seldom exceeding two hundred feet. The Mammoth, near a huge walnut tree back of the Evans lot, began flowing on May 15 to the tune of a hundred barrels. This was the first "spouter" in the district and it greatly increased the excitement. Four hundred barrels of oil were shipped to Pittsburgh by the steamboat "Venango" on April twenty-seventh. Twenty-two wells were drilling and twenty producing on July first. Farms for miles up French Creek had been bought at high prices and the noise of the drill burdened the summer air. Sugar Creek, emptying into French Creek three miles west of Franklin, shared in the activity. Then prices came down rapidly. Pumping was expensive, lands were scarce and dear, hauling the oil to a railroad cost half of its value and hosts of small wells were abandoned. On Novem-

ber first, within the borough limits, fifteen were yielding 140 barrels. Curtz & Strain had bored five hundred feet in October, the deepest well in the neighborhood, without finding additional oil bearing rock. The presidential election foreboded trouble, threats of war clouded the sky and the year closed gloomily.

The advantages of Franklin heavy oil as a lubricant were quickly recognized. It possessed a body that artificial oils could not rival. In the crude state it withstood a cold test twenty degrees below zero. Here is where it had the advantage over lubricants that solidify into a sort of liver formation when subjected to cold. The producing area of heavy oil is restricted to a limited section, where the first sand is thirty to sixty feet thick and the lower sands were entirely omitted in the original distribution of strata. For years operators hugged the banks of the streams and the low grounds, keeping off the hills. The famous "Point Hill," across French Creek from the Evans well, went begging for a purchaser. At its southern base Mason & Lane, Cook & Company, Welsby & Smith, Shuster, Andrews, Green and others had profitable wells, but nobody dreamed of boring through the steep "Point" for oil. J. Lowry DeWoody offered the hill, with its forty acres of dense evergreen brush, to Charles Miller for fifteen hundred dollars. He wanted the money to drill on the flats and the hill was an elephant on his hands. Mr. Miller at the time could not spare the fifteen hundred dollars and the offer was not accepted.

Colonel Bleakley and Dr. A. G. Egbert purchased the hill later at a low figure. Operations scaled the slopes and hills and the first well on the "Point" was a profitable one. Bleakley & Egbert profited greatly from their wells and the royalty paid by lessees. Daniel Grimm's production made him a leading Franklin oilman. He came to Franklin in 1861, had a dry goods store in partnership with William A. Horton and, in 1869, drilled his first well. W. J. Mattern and Edward Rial & Son had a large production. The foundation of a dozen fortunes was laid on the "Point," which still yields some oil, but not the quantities of the early days. A million dollars would not pay for the oil taken from the hill that found no purchasers for fifteen hundred dollars. From the western end of the hill thousands of tons of a peculiar shale was manufactured into paving brick, the hardest and toughest known.

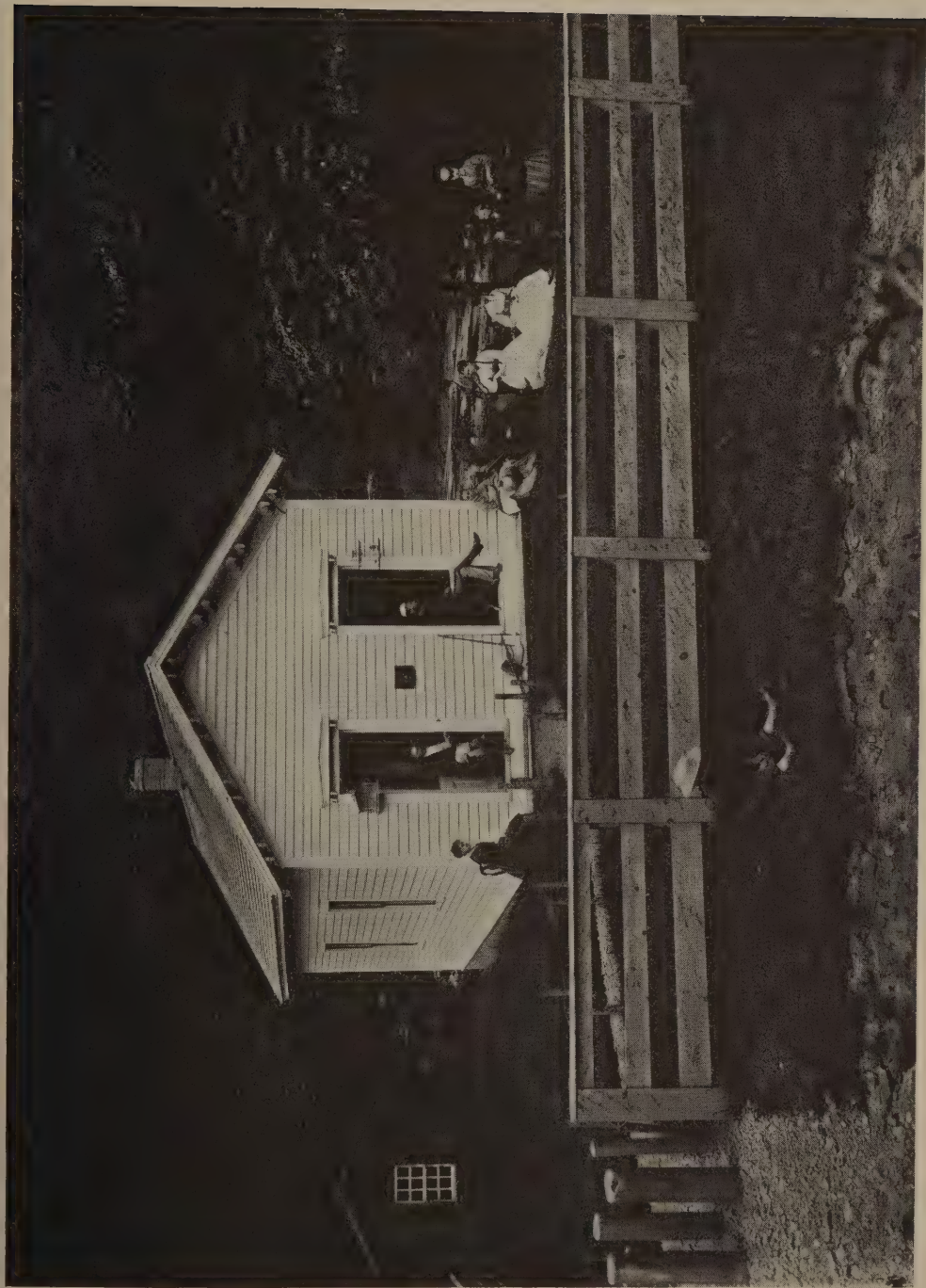
Gradually developments crept north and east. The Galloway, with its Dolly Varden well, was a good one. The Lamberton and McCalmont farms were covered with wells that paid lavishly. Henry

F. James drilled scores of paying wells on these tracts. In his youth he circled the globe on whaling voyages and learned coopering. Spending a few months at Pithole in 1865, he returned to Venango County in 1871, superintended the Franklin Pipe Line for five years and operated judiciously. He defeated measures inimical to the oil industry while serving three terms in the Legislature and promoted the passage of the Marshall bill, by which pipe lines were permitted to buy, sell or consolidate. This law relieved pipe lines in the older districts, where the production was light, from the necessity of maintaining separate equipments at a loss or ruining hundreds of well owners by tearing up the pipes for junk and depriving operators of transportation. He also was active in agriculture.

Casper Frank, William Painter, who was killed at his wells, Dr. Fee, the Harpers, Colonel E. D. Yates and others extended the field into Sugarcreek Township. Elliott, Nesbett & Bell's first well on the Snyder farm, starting at thirty barrels and settling down to fifteen, elongated the Galloway pool and brought adjoining lands into play. Kunkel & Newhouse, Stock & Company, Mitchell & Parker, Crawford & Dickey, Dr. Galbraith and M. O'Connor were active operators. The extension to the Carter and frontier farms developed oil of a lighter gravity, but a good lubricator. It has been said that a Mrs. Harold, a lady from Chicago, dreamed a certain plot, which she beheld distinctly, would yield heavy oil in abundance. She visited Franklin, traversed the district a mile in advance of the developed territory, saw the land of her dream, purchased it, drilled wells and obtained great quantities of oil.

Jacob Sheasley, who came from Dauphin County in 1860 and embarked in the oil business in 1864, was one of the largest operators of the district. He drilled at Pithole, Parker, Bradford, on all sides of Franklin, and put down hundreds of wells. He enlarged the boundaries of the lubricating section by leasing lands previously condemned and drilling test wells in 1893-94 with satisfactory results. His son, George R., operated in Venango and Butler counties and had a large number of wells on Bully Hill, with his brother Charles as partner.

A mile north of Franklin, in February, 1870, the Surprise well on Patchel Run, a small stream bearing the name of the earliest hat maker, surprised everybody by its output. It foamed and gassed and frothed excessively, filling the pipe with oil and water. Crowds went to view the output of oil into the tank and the popular estimate was a production of four hundred barrels, but it settled down to about four or five barrels a week.



Office of Indian Rock Oil Company, Miller Farm

Major W. T. Baum operated in the heavy oil field thirty-two years, beginning in 1864. He passed through the Pithole excitement and drilled largely at Foster, Pleasantville, Scrubgrass, Bullion, Gas City, Clarion, Butler and Tarkiln. In 1894 he sank a well on the west bank of the Allegheny opposite Kennerdell Station, in hope of getting a ten-barrel well. It pumped 150 barrels a day for months and was still doing fifty barrels two years later, along with three others of similar capacity. He owned the wells and lands on Patchel Run, which yielded a good income. Colonel J. H. Cain, Colonel L. H. Fassett and J. W. Grant, all successful operators, had wells in the vicinity of Franklin. Devices connected wells far apart, by coupling them with rods two to ten feet above the ground, so that a single engine could pump thirty or forty wells in shallow territory. The downward stroke of one helped the upward stroke of the other, each pair nearly balancing. This enabled the owners of small wells to pump them at the least expense. Heavy oil sold for years at \$3.65 to \$4.00 a barrel; therefore, a quarter-barrel each from forty wells, handled by one man and engine would be quite profitable.

On Two Mile Run, up the Allegheny two miles, W. S. McMullan drilled several wells in 1871-72. The product was the blackest of black oils, indicating a deposit separated from the main reservoir of the lubricating region. Subsequent operations demonstrated that a dry streak intervened. Captain L. L. Ray drilled wells near the river in 1894. Mr. McMullan resided at Rouseville and had valuable interests on Oil Creek. He served a term in the State Senate and eventually removed to Missouri to engage in lumbering. George P. Smith's tract of land between Franklin and Two Mile Run netted him a competence in oil and then sold for one hundred thousand dollars.

The production of heavy oil in 1875 aggregated one hundred thirty thousand barrels. In 1877 it dropped to eighty-eight thousand barrels and in 1878 to seventy thousand. Thirteen hundred wells produced sixty thousand barrels in 1883. Taft & Payne's pipe line was laid in 1870 from the Egbert and DeWoody tracts to the river, extended to Galloway in 1872 and combined with the Franklin line in 1878. The Producers Pipe Line Company began to transport oil in 1883. J. A. Harris, who died in 1894, had the first refinery in the oil region in 1860. His plant was extremely primitive. Colonel J. P. Hoover built the first refinery of note, which burned in the autumn of 1861. Sims & Whitney had one in 1861 and the Norfolk Oil Works was established the same year, below the Allegheny

Bridge. Samuel Spencer, of Scranton, expended \$30,000 on the Keystone Oil Works, near the cemetery, in 1864. Nine refineries, most of them running the lighter oils, were operated in 1864-65, after which the business collapsed for years.

For some time heavy oil was used principally in its natural state. At length improvements of great value were devised, out of which grew the oil works devoted solely to the manufacture of lubricants. Among these the most important and successful was that adopted in 1869 by Charles Miller, of Franklin, protected by letters-patent of the United States and later by patents covering his complete method. Besides improvements in the method of manufacture, he discovered the value of galena, a lead oxide, as an ingredient in lubricating oils and patented the process.

In 1869, Mr. Miller and John Coon, the latter an uncle of the author, were engaged in the dry goods business in Franklin. At that time there was a large wooden building located at "The Point," where French Creek joins the Allegheny River, which was used for the manufacture of oil. This plant was known as the "Great Northern Oil Company." A Mr. Hendricks, from Carbondale, Pennsylvania, owned it and was manufacturing oils by a patented process. A gentleman by the name of Street had leased the plant from Hendricks and was to pay \$1.00 per barrel royalty for the use of his patent in manufacturing this oil. In about six months Mr. Street failed, losing about \$30,000. He had sold some oil to Philadelphia parties, but they failed to pay him for it.

Mr. Hendricks talked with Mr. Miller about his patented process for making oil and Miller & Coon agreed to purchase the plant for \$6,000 and pay Hendricks a royalty of \$1.00 per barrel on all oil sold. The process consisted of mixing Franklin heavy oil, whale oil, and lead. The option expired on July first, and R. L. Cochran, of Franklin, joined with Miller & Coon and they formed a partnership under the name of Miller, Coon & Company, and organized an oil company known as the "Point Lookout Oil Works." These gentlemen began to manufacture oil especially designed for railway lubrication, and the first railroad secured as a customer was the Union Pacific, which road used the oils continuously for more than fifty years thereafter. The company then did a business of about five hundred barrels a month.

They never paid Mr. Hendricks any royalty, but Mr. Miller asked Mr. Hendricks what he would take for his patent, and he said \$6,000. Mr. Miller bought the patent at this figure, payable at the rate of \$300 a month. Two years after that Mr. Hendricks offered

the company \$60,000 for the patent. Had he not sold his patent and abided by his original intention of accepting \$1.00 per barrel royalty on all oil sold, he would have realized over \$2,000,000 from the company. On January 1, 1870, R. L. Cochran disposed of his interest to Rev. R. H. Austin, of Meadville. The firm was then known as Miller, Austin & Company.

In the year 1870 the profits of the company amounted to \$12,000. At this time the company had but one man engaged in manufacturing the oil, one man to barrel the same, and Mr. Miller did the firing of the boilers and ran the engine. He attended to the firing job so well that, carried away by his enthusiasm over the success of the business, he succeeded in getting the iron smoke stack red hot and this set fire to the plant and it burned to the ground, entailing practically a total loss. There was, however, insurance amounting to \$6,000 on the property.

In reorganizing the company, another partner was taken in, in the person of H. B. Plumer, of Franklin, and the new company was known as the Galena Oil Works. This name was afterwards changed to the Galena Oil Company, Limited, and later on to the Galena Oil Company. After the fire, they purchased property in the Third Ward, known as the Dale Oil Works. For this they paid \$12,000 and in thirty days after the new building was fitted out to accommodate their business, they were shipping oil to their former customers.

The business grew year by year until in the year 1878 the partners wished to dissolve the partnership and it was decided to install a couple of stills in order to induce the Standard Oil Company to purchase their interests. It was in December, 1878, when John D. Archbold, in behalf of the Standard Oil Company, came to Franklin and purchased the interests of the partners of Mr. Miller, the latter retaining an interest.

At this time the shipments of the company amounted to some sixteen thousand barrels of oil a year. Mr. Miller was elected president and general manager of the new company, and operated the plant from that day until the year 1908, at which time he had so increased the business of the company that their shipments reached the enormous total of seven hundred thousand barrels of oil. In 1908, S. A. Megeath was made president of the company, and General Miller, as he was known for the better part of his life, was made chairman of the board of directors. In 1916 the shipments of the company exceeded eight hundred thousand barrels.

In 1875 another oil company was formed, known as the Signal Oil Company, engaged in the manufacture of valve and signal oils. Joseph C. Sibley, a brother-in-law of General Miller, was president of this company. In 1902 the Galena Oil Company and the Signal Oil Company formed a consolidation, under the name of the Galena-Signal Oil Company.

Mr. Sibley experimented for years with petroleum oils for use in steam cylinders under high pressure. He found that where the boiler pressure was not in excess of sixty pounds, lubrication of a steam cylinder with petroleum was a matter of little or no difficulty. With increase in pressure came increase in temperature. As a result the oil vaporized and passed through the exhaust. The destruction of steam chests and cylinders through fatty acids incident to tallow, or tallow and lard oils, cost millions of dollars annually; but it was held as a cardinal point in mechanical engineering that these were the only proper steam lubricants. Mr. Sibley persisted in his experiments and conversed with leading superintendents of machinery and with leading chemists in the United States. Almost invariably he was laughed at when he asserted his determination to produce a product of petroleum, free from fatty acids, capable of better lubrication even than the tallow then in use. Many of his friends in the oil business, who thought they understood the nature of petroleum, expressed the deepest sympathy for Mr. Sibley's hallucination. Amid partial successes, interspersed with many failures, he continued the experiments. So incredulous were chemists and superintendents of machinery, so fearful of disasters to their machinery through the use of such a compound, that he had in many instances to guarantee to assume any damages which might occur to a locomotive through its use. He rode thousands of miles upon locomotives, watching the use of the oil, daily doubling the distance made by engineers. Success at last crowned his efforts and the Perfection Valve Oil became the standard lubricant for valves and cylinders.

The results were astounding. Destruction of steam joints by fatty acids from valve lubricants became an unknown thing. Not alone this, but as a lubricant the Perfection Valve Oil proved itself so much superior that, where valve seats had required facing on an average once in sixty days, they did not require facing on an average once in two years with the Perfection Valve Oil in use. With the increase of pressure and the corresponding increase of temperature it was found next to impossible to properly lubricate the valves and cylinders to prevent cutting. It has been said that the superintendent

of a leading American railway sent for Mr. Sibley at one time and told him that he proposed to build passenger locomotives carrying 180 pounds pressure and asked if he would undertake to lubricate the valves and cylinders under that pressure. The reply was: "Go ahead. We will guarantee perfect lubrication to a pressure very much higher than that." The firm also made Perfection Signal Oil for use in railway lamps and lanterns, a product of such superior merit that it was used in more than three-fourths of the railway lanterns of the United States.

About 1896 the Galena Oil Company introduced their oils upon the French railways. This branch of the company was known as the Société des Huiles Galena, of which General Miller was president. They had a large plant at Rouen, France, and supplied the State railways of France and other French railways. They also had a large business in England and in South America.

In order to take care of the export trade, the Galena-Signal Oil Company built a large plant at Bayway, New Jersey, dredging the waterfront to a depth of twenty-five feet, constructed a bulkhead and large capacity steel storage tanks. Plants were also located at Toronto, Canada; Parkersburg, West Virginia; and distributing plants at Boston, Massachusetts, and Whiting, Indiana. Offices were maintained in the larger cities—New York, Boston, Cincinnati, Chicago, Atlanta and San Francisco, and many others.

The company maintained a corps of mechanical experts, excellent gentlemen whom the people of Franklin always looked forward to meeting on the occasion of their conference meetings at the home office. These men, many of whom were former locomotive engineers, had the responsibility of traveling along the routes of the various railways of the country and instructing railway employees in the proper use of the Galena-Signal products in order to secure the maximum of service and eliminate waste. They had a modern and completely equipped laboratory built particularly for scientific investigation and research, and the chief chemist, Dr. P. H. Conradson, a graduate of European and American schools, was probably the best informed man in this country on lubricants.

A special department was established, known as the Railway Auditing Department, for the purpose of keeping statistics on the cost of lubrication and making settlements under guarantees of various contracts made with the railroad companies. They had an unique sales plan; shipments were billed as a matter of record, but final settlements were made on a guaranteed mileage basis.

An intensive study and analysis of the various phases of operation and the different classes of equipment through the mechanical expert department, the pioneer service organization of America, and laboratories equipped to develop the most exacting physical and chemical tests of bearings, bearing metals and lubricants, and exhaustive service tests conducted for the purpose of determining, to an absolute certainty, the particular properties essential to the lubricant to yield best results, and the practices or methods of use that would make these results positive and economical, as well as efficient, resulted in millions of dollars being saved to the railroads in maintenance costs. This was not only in oil, through greatly reduced consumption, but in time, labor, repairs, fuel and longer service life to bearings and motion parts of equipment. Comparative tests in actual service developed the ratio of Galena lubrication superiority over other oils or methods as at least four to one. With car boxes sealed and run without opening until the journal heated, it was demonstrated many times that where boxes lubricated with other oils heated when run from two to five hundred miles, and required refilling, those lubricated with Galena, after running from two thousand to six thousand, and in some instances up to fifteen and twenty thousand miles, were still running cool. In the case of one large American railroad the average number of hot boxes on passenger equipment between two terminals was 128 daily. After the adoption of Galena lubrication, this was reduced to approximately *forty hot boxes in a year*, and these occurred from other causes than lack of proper lubrication.

The company enjoyed the business of the New York Elevated Railways Company from the time the road commenced operation and also lubricated the subway lines following their completion. The electrical department began the supplying of oils to trolley lines and street railways in 1890, and this branch of the business reached the point where approximately seventy-five per cent. of the street car mileage of the country used their products for lubrication. At about the same time, they began to furnish oils to some of the railways of Canada and eventually acquired the business of nearly every railroad in the Dominion. About ten years later they entered the Central and South American field and acquired the business of over seventy per cent. of the railway mileage there. It has been estimated that the Galena-Signal Oil Company's business reached the point where they furnished approximately ninety per cent. of the railroad mileage of the United States, Canada and Mexico, as well as an addi-

tional extensive business in various other countries throughout the world. It was frequently said that in some countries of the world there were natives who knew but two words of English, "Galena" and "Franklin."

During the period from 1879 to 1911, while the Standard Oil Company of New Jersey had a controlling interest in the Galena-Signal Company, and the management of the business continued under the able direction of General Miller, the Galena-Signal Company continuously supplied the lubrication needs of nearly all the railroad mileage of the country, in addition to their large foreign business and that of the street railways. The very great superiority of their product for railroad lubrication and the most remarkable record of service to the railroads in the use of these products, thus deriving the maximum of efficiency, through the efforts of the mechanical experts department, and the constant research and experimentation in their well-equipped chemical and physical laboratory, induced the Standard interests to leave the railroad field to the Galena-Signal Company, which, in turn, confined its sales to that field.

With the dissolution of the Standard Oil Company of New Jersey in 1911, and the separation of their thirty-two different companies, the Galena-Signal Oil Company acquired approximately six thousand new stockholders through the distribution of stock owned by the Standard Oil Company of New Jersey to their stockholders, and some of the large former companies comprising the Standard Oil Company of New Jersey group became strong competitors for the railroad business.

In 1928 a reorganization took place, whereby certain fixed assets of the company and its subsidiaries were sold to The Texas Company. The remaining operating properties and business, including the parent plant at Franklin, laboratory, office building and the plant of the Franklin Lead Oxide Company, were absorbed by a new corporation under the name of Galena Oil Corporation. In 1932 the Galena Oil Corporation was absorbed by the Valvoline Oil Company, with refineries at Warren and Butler, Pennsylvania, and offices at Butler and Cincinnati.

The Galena company was instrumental in bringing the Eclipse Oil Works to Franklin. It had formerly been located at Aladdin, Pennsylvania, and Dr. Herbert W. C. Tweddle moved the company to Franklin. The company operated there for about two years, at the end of which time it became insolvent, and was sold to the Standard Oil Company for \$180,000, which was the amount owed the

bank, and the original stockholders receiving nothing. Under the very capable management of the Standard Oil Company, the Eclipse Lubricating Oil Works developed into one of the largest refineries of the country and, at one time, it was said to be the largest lubricating oil works in the world.

The Galena company secured large quantities of raw products from the Eclipse plant and had a pipe line connecting the two plants.

Following the events recorded, General Miller organized another company known as the Home Oil Company, later as the Franklin Railway Oil Company, and the plant of this company is now owned and operated by the Socony Vacuum Oil Company, Railroad Division, which company was formerly a Standard Oil Company subsidiary.

The Eclipse Lubricating Oil Company, Limited, reference to which has already been made, was organized in 1873 by Franklin capitalists, with Dr. A. G. Egbert as president, C. W. Mackey vice-president, John B. Moorhead secretary, Foster W. Mitchell treasurer, and Dr. Tweddle manager.

In 1876 the concern passed into the hands of the Standard Oil Company. At that time the plant consisted of ten small stills, one seven thousand-barrel tank, two two-thousand barrel tanks and one one thousand five hundred-barrel tank with smaller tanks. The Standard Oil Company placed Thomas Brown in charge of the plant as manager and he continued in that capacity for several years. In 1884 Colonel S. C. Lewis was made president and Duncan McIntosh secretary and treasurer. In 1902 the Eclipse Works was made a part of the Atlantic Refining Company, which also had plants at Pittsburgh and Philadelphia and distributing stations in almost every city and town in the State. With its acquirement by the Atlantic Refining Company, Colonel Lewis became general manager and Mr. McIntosh assistant general manager.

Mr. McIntosh retired in 1913 on account of ill health and was succeeded as assistant manager by G. E. Glines. Upon the retirement of Colonel Lewis the following year, Mr. Glines became general manager and F. G. McIntosh succeeded him in the position so long and ably filled by his father.

When it is considered that in 1884, when Colonel Lewis and Duncan McIntosh took charge of the plant, the entire works covered a small area and included only a few small stills, the wonderful growth under their direction is more fully realized.

The plant eventually stretched along both sides of the public highway for a distance of approximately one and three-fourths miles and its greatest width was about three-quarters of a mile. Its number of employees reached a total of nearly one thousand and the approximate pay roll was one million dollars annually.

This plant to a considerable extent blazed the way in the manufacture of petroleum products by originating a number of new processes and methods which were adopted by other refineries in all parts of the world, a flattering recognition of the success attained by the Franklin plant in its own business. Another service rendered by this plant was the training of a large number of young men in the details of the petroleum industry, which led to their placement in responsible positions within the industry and important contributions to its development which were made by them.

The company was ever solicitous about making working conditions pleasant, safe and sanitary and organized a safety committee from its employees and their suggestions looking to greater safety were gladly carried out by the company. In view of the hazardous nature of the operations, serious accidents were rare. The company maintained a pension system and many employees remained with the company during their entire working period, while the company never had a strike or any kind of labor trouble.

An interesting experiment in the production of crude oil is now under way, which is, in part, reverting to the ancient method of the Burmans, and which is being watched by every one engaged in the petroleum industry.

The innovation of horizontal drilling of crude oil is to be tested in the Two Mile Run district, adjacent to Franklin, at an estimated cost of \$75,000, by a corporation composed of producing, refining and marketing firms, as well as individuals, and which may lead to the recovery of vast stores of Pennsylvania crude.

What may be the first large-scale test of the horizontal drilling theory in the world involves the sinking of a circular shaft, eight feet in diameter, and about four hundred feet deep, into the Venango first sand, on the property owned by D. W. Grant and Dohrman S. Grant, in Sugarcreek Township along Snyder Run, a tributary of Two Mile Run.

The oil in that sand is known as the Franklin heavy crude and has an unusually high lubricating content and contains less gasoline and other light distillates than any other crude produced in Pennsylvania fields.

The new company, known as the Venango Development Corporation, has Leo Ranney, inventor of the method of horizontal drilling, as technical advisor, and is made up of the following:

Producing Companies—South Penn Oil Company, Pittsburgh, with operations in all sections of the Pennsylvania field; the Forest Oil Company, Bradford, with operations in the Bradford-Allegany fields and in the West.

Refining and Marketing Companies—Quaker State Oil Refining Corporation, Oil City; the Pennzoil Company, Oil City; Alliance Oil Corporation, New York; Kendall Refining Company, Bradford; United Refining Company, Warren; Franklin Creek Refining Corporation, Franklin; Canfield Oil Company, Cleveland; Pennsylvania Refining Company, Butler; Freedom Oil Company, Freedom, Pennsylvania.

Individuals—Earl Emery, Bradford; John Herrick, Olean, New York; Clarence M. Davison, New York; N. V. V. Franchot, managing trustee, Bolivar, New York; Grant & Grant, Franklin.

The company obtained a lease of four hundred acres from Grant & Grant for their purposes and a license from Mr. Ranney to operate under his patents. If the experiment proves successful and Mr. Ranney's estimates prove correct, a yield of two to three million barrels of the Franklin heavy crude will be realized in time.

The shaft, now down about 275 feet, is being dug, not drilled, to a depth of about 400 feet, which should take it into the Venango first sand. In the Franklin area this sand is a flat body ranging from 250 to 700 feet below the surface. At the bottom of the shaft will be dug a circular working chamber, twenty-seven feet in diameter. Both shaft and chamber are to be lined with twelve to eighteen inches of concrete, the shaft being now so lined as the work progresses. The shaft will enter the chamber at one side and not in the center. As the concrete wall of the shaft is being constructed, oil pipes, as well as conduits for air, gas, water and wires are being imbedded in it.

From the chamber it is anticipated that three-inch holes will be bored horizontally into the face of the sand, extending out as much as two thousand feet. The number of holes to be drilled has not been stated, nor as to whether repressuring would be applied, either through additional holes between the producing holes or through wells drilled from the surface. It is anticipated that the oil will flow by gravity from the horizontal holes into a pump at the bottom of the working chamber, by which it will be forced to the surface.

No analyses of the core tests made on the Grant property have been made public by the company, but it has been stated that the sand

is very suitable for the purpose and there is promise of a good recovery of oil. However, Mr. Ranney stated in a talk before the Illinois-Indiana Petroleum Association in June, 1941, that "From a (Pennsylvania) property worthy of development in this fashion, a recovery of 5,000 to 8,000 barrels per acre should be expected."

In that talk, the inventor estimated the cost of excavating, lining and equipping a shaft and chamber similar to that being made here would be \$55,000. The cost of drilling the horizontal holes was estimated at \$1.00 per foot. The total estimated cost of the shaft, a pair of wells and provision for emergencies, engineering and overhead in round figures would be \$75,000. These, it is noted, are pre-war estimates.

Mr. Ranney made production estimates for sand with a higher degree of gravity than the Venango County first. "Each 100 feet of hole will produce 1/16th barrel of oil (of 43 degrees A. P. I. gravity) per hour, or 1 1/2 barrels per day." The gravity range here is 31-32.

On the basis of Mr. Ranney's figures, and counting on a pair of two thousand-foot wells as suggested by the development company in the experiment, a daily yield of upwards of eighty barrels a day can be expected if the test is a success.

Mr. Ranney saw a huge drop in production costs under his drilling theory. "The cost of pumping the fluid from the shaft will be less than one cent per barrel. From a property worthy of development in this fashion a recovery of 5,000 to 8,000 barrels per acre should be expected. It would be difficult to foresee an overall development and production cost as high as 50 cents per barrel, even in the thin and tight sands of the eastern fields."

D. W. Grant, a vice-president of the Pennzoil Company, has played a leading rôle in the formation of the company, which will assure a sufficient financial support and at the same time divide the loss in the event that the horizontal operation is not successful.

Venango County is in what is known as the Middle District of the Pennsylvania region, which seems to be the best testing place for the operation, since the oil sands are at the shallowest point. The oil content per acre is not as great as in the Bradford-Allegany fields, where water drive has proved successful. The Middle District sands do not lend themselves to water drive, but air and gas pressure has proved successful. Reserves recoverable by present methods, according to a recent survey, are greater in the Middle District than in any other area of the Pennsylvania region.

The crude from the Venango first sand is a premium grade lubricating oil and was made famous by the old Galena-Signal Oil Company of Franklin. The lube content is over fifty per cent., compared with about twenty-two per cent. for other Pennsylvania grade crude generally.

Mr. Ranney is the inventor of processes for mining and horizontal drilling for recovery of natural gas (fire-damp) from coal seams and for the creation of underground gas reservoirs. The technical adviser of the new company, as a first experiment, drilled a horizontal well into an outcrop of the First Cow Run, Morgan County, near McConnellsville, Ohio.

The officers of the Venango Development Corporation are: S. Messer, of the Quaker State Oil Refining Company, president; Forest D. Dorn, Forest Oil Company, Bradford, vice-president; John E. Selden, South Penn Oil Company, secretary; W. R. Reitz, Quaker State Oil Refining Company, assistant secretary; M. A. Brewster, Pennzoil Company, treasurer; and D. W. Grant, Pennzoil Company, assistant treasurer.

The petroleum industry in general, and that of Pennsylvania in particular, are watching with great interest the developments which will follow this experiment. It may revolutionize production in the Middle District of this region and in other regions where the sands are shallow. The anticipated production cost of fifty cents a barrel as against the present price of \$2.43 to \$2.48 for Oil City-Titusville crude is an important factor.

This experiment demonstrates not only the resourcefulness, but also the unconquerable spirit that has always characterized the men engaged in the petroleum industry. The place wherein it was desired to conduct the experiment is located in a dense forest area, to reach which it was necessary to build a road. A huge bull-dozer was brought in and, starting from the Two Mile Run road, the powerful machine felled great trees and sheared off the edge of a rocky hillside for a considerable distance and, within six days, a road nearly a half mile in length was constructed, providing easy access to the scene of operation.

At the beginning of 1874, the crude oil production of the United States was about thirty thousand barrels per day and the market price of crude oil opened the year at \$1.65 per barrel. In the fifteen years between January 1, 1874, and December 31, 1888, 315,293,000 barrels of oil was produced, valued at \$306,030,000, or an average of ninety-seven cents per barrel. In the fifteen years pre-

vious, 1859-73, 54,357,000 barrels of oil was produced, valued at \$195,766,000, or an average of \$3.60 per barrel.

Up to the close of 1875 Pennsylvania produced all the crude oil of record, although West Virginia produced a little oil years before that time and marketed it. In 1876, Ohio, West Virginia, and California all came into the production picture in a small way, Ohio with a production for the year of 32,000 barrels, West Virginia with 120,000 barrels, California with 12,000 barrels. Pennsylvania produced 8,969,999 barrels. The total production of 1876, 9,133,000 barrels, had an average value of \$2.52 per barrel.

No new development in production occurred until 1887, when that of New York was first recorded separately, at 6,685,000 barrels. In the same year Pennsylvania produced 23,368,000 barrels; but Ohio, West Virginia, and California were still small producers and the total for the United States had risen to 30,350,000 barrels, valued at \$23,631,000.

The evil of overproduction cast its spell over the oil region in the years following 1877. The average price of oil in 1875 was \$2.91 per barrel; 1876, \$2.52; 1877, \$2.38; 1878, \$1.17; and then it fell below the dollar mark. In 1878 the market opened at \$1.63 $\frac{3}{4}$, but it fell in July to eighty-four and three-eighths cents, and in October it dropped to eighty cents, closing the year at an average of ninety-six cents in December, giving the year an average of \$1.17 per barrel.

The Bradford field in northern Pennsylvania, which developed into the largest field of its time and one of the nine largest all-time producers in the United States, had begun to make its influence felt in 1878, when it produced 6,500,000 barrels of oil out of a total of 15,397,000 barrels in the United States, or forty-two per cent. of the total. It reached its productive peak in 1881, when it produced 23,000,000 barrels in round numbers out of a total in the United States of 27,661,000 barrels, or eighty-three per cent. of the country's entire output, and seventy-seven per cent. of all the oil produced in the world that year. In the three largest years of the field, 1880, 1881 and 1882, the Bradford field produced 63,000,000 barrels, or seventy-four per cent. of the country's production and sixty-four per cent. of the world's production in the same period. No other field since has so nearly monopolized total crude output as the first of the big fields.

Bradford's continued big production in 1882 sent the average price of oil for the year down to seventy-eight cents per barrel. The

Bradford field in the fifteen years covered by the period from 1874 to 1889 produced 140,166,000 barrels, or forty-four per cent. of a total of 315,293,000 barrels produced in the United States, in Pennsylvania, New York, West Virginia, Ohio, California, and Colorado, the only producing states up to the end of the period. It was the only very large field developed in the first thirty years of the industry.

The second of the five fifteen-year periods making up the seventy-five years of the industry saw the establishment of oil exchanges where credit balances for oil run from the producing properties into the pipe lines were a matter of trade. In all the fifteen years the highest price received for the producer for oil—all of it excepting the California oil being what is known now as Pennsylvania grade—was at the very beginning \$2.75 per barrel. The lowest price received was forty-nine and one-quarter cents per barrel in July, 1882. Market prices fluctuated smartly in those times, often changing from hour to hour, and even from minute to minute, in a lively day in the exchanges located at Oil City, Bradford, Pittsburgh, and New York. The market in the last month of the second fifteen-year period, December, 1888, had a high price of ninety-three and one-half cents and a low of eighty-four and five-eighths cents.

Nearly 15,000 oil wells were drilled in the Bradford field of 85,000 productive areas. The oil came so fast that the pipe lines could find a market for only a part of it and the rest went to storage. Great tank farms were constructed in the Pennsylvania grade fields, the largest being in Bradford, and stocks rose to 39,086,004 barrels in August, 1884, enough oil to meet the demands of the refiners for over nineteen months, if all the fields had quit producing. In 1934 crude oil stocks on hand were equal to only 132 days refinery demand, but in the summer of 1884 they equalled the refinery demand for about 575 days, and yet the oil business did not "blow up" or "go to the wall." Quoting from the publication of "The Oil and Gas Journal—The Oil City Derrick," in 1934, at the time of the seventy-fifth anniversary of the Drake well: "Like the chap Mr. Henley wrote about in 'Invictus,' the oil man stuck his chest out and roared:

" 'Out of the night that covers me,
Black as the pit from pole to pole,
I thank whatever gods may be
For my unconquerable soul.' "

Under the bludgeonings of fate his 'head was bloody, yet unbowed.' " In other words, he went out after new fields, regardless of the current situation with its very low prices. Wildcatters were active in a dozen

states. The mid-continent had been penetrated by oil men who were active in Kansas, Indian Territory, and Texas. Up in Wyoming, Mark Shannon and Barney McCalmont were trying to open a pool, and finally succeeded in opening Salt Creek in the Shannon sand, therefore hastening the exploration and later development of Wyoming, Montana, Colorado, and New Mexico. But notwithstanding the work of wildcatters at the close of the second fifteen years of the oil history, the 27,612,000 barrels of oil produced in the country came from the following eight states: New York, 2,000,000 barrels; Pennsylvania, 14,000,000 barrels; Ohio, 10,011 barrels; West Virginia, 119,000 barrels; Kentucky-Tennessee, 5,000 barrels; Colorado, 298,000 barrels; and California, 690,000 barrels. The year's supply had a value of \$17,948,000, or an average of sixty-five cents per barrel, the lowest average price since the early 1860s.

The reason the Bradford field was developed so rapidly—the new wells coming in at a rate of hundreds per month at the peak of operations—was that two of the largest pipe line systems, the United Pipe Lines and the Tide Water served the field. The largest of these was the United Pipe Lines (afterward the National Transit Company, owned by the Standard Oil Company). Late in the seventies the company started a tank farm just north of the city of Bradford and in two peak years of the field's production, tanks were built as fast as they could be put together. A record of a tank and a third per day, or four tanks in three days, was maintained at the peak of the building campaign. The tanks were of wrought iron and later of steel, and twenty thousand to thirty-five thousand barrels capacity. It is interesting to note that some of the wrought iron tanks built in the late seventies or early eighties are still in use on the Sinclair Prairie Oil Company's Neodesha tank farm in Kansas. They had been cut down and rebuilt, doing service in the Lima fields before being moved to Kansas.

There were no pipe lines to seaboard when this storage building campaign started. The pipe line to seaboard had been talked of for years, but there seemed no reason for such a gigantic outlay of capital until the Bradford field began producing at a rate beyond the wildest dreams of any of the oil men of that period.

Work on the National Transit's pipe line from the Pennsylvania grade oil fields to the Atlantic seaboard was decided upon in 1879. When completed it consisted of two six-inch lines from Olean, New York, to Saddle River, New Jersey, across the river from Bayonne, New Jersey. The first oil was run through to Bayonne in 1881.

Previously the Tide Water Pipe Company, Ltd., had laid the first line over the mountains, starting at Coryville, on the edge of the Bradford field and ending at Williamsport. The oil piped through this line was delivered to the Philadelphia & Reading Railroad, which conveyed it to the seaboard refinery of the Tide Water at Bayonne.

Upon the completion of the National Transit Company's seaboard pipe line the crude oil stocks piled up in the Bradford field in Pennsylvania and the Alleghany field in New York began to move to the East.

The Standard Oil Company, with so much oil on hand, set about to develop world markets. Quoting again from the publication of "The Oil and Gas Journal—The Oil City Derrick": "The story of that campaign is a tale in itself, but it resulted in the use of the kerosene lamp in countries that had never seen a lamp except in the homes of the wealthy. Illuminating oil came into common use in the homes of even the very poor all over the civilized world, and crude oil stocks would have soon disappeared from the face of the earth had it not been that the ubiquitous wildcatter discovered new sources of petroleum, the discoveries and subsequent development keeping ahead of the demand in most of the years since."

Up to the close of 1875, no production was recorded in any State outside of Pennsylvania. In 1876 West Virginia is credited with having produced 120,000 barrels of oil valued at \$298,000, and southeastern and central Ohio with 32,000 barrels, valued at \$92,000. All of this was Pennsylvania grade oil. In the thirteen years of the second fifteen-year period in which the two fields above mentioned produced oil, the West Virginia field was credited with 1,783,000 barrels, valued at \$2,045,000 and the southeastern and central Ohio, with 2,387,000 barrels, valued at \$1,723,000.

Pennsylvania grade oil is manufactured from crude produced within the Pennsylvania grade area—well known in the industry as being comprised of the fields in western Pennsylvania, western New York, northern West Virginia, and southeastern Ohio. It is characterized by the quality and quantity of its lubricating oil fraction. It can be and commonly is readily distinguished from other oils. Sixty per cent. of United Nations aircraft is lubricated with Pennsylvania oil. The region is the largest in the world producing a *uniform* grade of crude oil.

Geologists agree that the reserves in the Pennsylvania grade region are sufficient probably to outlast any other field, including

those most recently discovered. Production is about eighty thousand barrels per day, sufficient for the lubrication of twenty-five to thirty per cent. of all automobiles in the United States at pre-war time.

Among the twenty major or intergraded oil companies in our country, each of the following has refineries for refining Pennsylvania grade crude: Gulf Refining Company, at Neville Island, Pittsburgh; Socony-Vacuum, at Olean, New York; Cities Service Company, at Titusville, Pennsylvania; Sinclair Refining Company, at Wellsville, New York; Pure Oil Company, at Cabin Creek, West Virginia; and Tidewater Association Oil Company, at New York.

In 1914 the once great Bradford field was believed to be almost at its end. It was producing at the lowest quantity in forty-five years. It was at about that time that the discovery was made in this field that water in poorly plugged wells was being forced through the sands driving dormant oil ahead of it into producing wells and increasing their production. Producers realized the importance of this discovery and took advantage of it and started what is now known as repressuring depleted sands. The result was that property values rose to high prices and the field began its upward rise in production.

One writer has said: "Pouring oil on troubled waters is one thing; in McKean County they have reversed the process and have rehabilitated an oil industry that seemed doomed." Today the Bradford oil field yields about eighty-five per cent. of the total Pennsylvania production, and is the Nation's second largest field in total of continuous production area. The rejuvenation was due to the successful use of artificial water-flooding methods whereby the oil was forced to the surface by this means when the natural pressure of the oil reservoirs became exhausted.

Since 1871 the Bradford field has produced virtually 400,000,000 barrels of oil. Of this amount, 203,600,000 barrels were produced by the ordinary methods utilizing natural pressure, while an additional 175,000,000 barrels have been recovered by water-flooding. Experts believe that by continuing the water-flooding method the ultimate yield can be increased to approximately 500,000,000 barrels.

According to the State Planning Board of the Pennsylvania Department of Commerce, sixty per cent. of the total oil originally present in the Bradford field will still remain under ground when the present system of water-flooding ceases to be effective.

"The problem becomes a major challenge to the inventive genius of Pennsylvania," states Richard P. Brown, State Secretary of Commerce. "New methods will have to be discovered for the recovery

of this large portion of our oil resources. When it is considered that no other oil in the world can even approach Pennsylvania oil in point of quality for lubricating purposes, the challenge becomes all the more insistent."

Production of crude oil in the Bradford field during the week ending August 1, 1942, averaged 45,759 barrels daily, according to the Bradford District Pennsylvania Oil Producers' Association. This was an increase of 7,728 barrels in the daily average production over the previous week. The average for the week ending July 25 was 38,021 barrels, the output during this period having been affected by the flood which swept that district and which will be related in another chapter. The adjacent Allegany field production increased from a daily average of 10,740 barrels in the week of July 25 to 12,495 barrels daily in the succeeding week, an increase of 1,755 barrels daily.

Eighty-two per cent. of the entire crude petroleum production of the Commonwealth of Pennsylvania in 1940 came from McKean County, according to figures based on statistics released by the State Department of Internal Affairs. Production of premium grade crude in McKean County for 1940 totaled 14,311,091 barrels, the report showed. The State's total output was 17,434,627 barrels.

Ranking in second place in volume of crude oil produced in 1940 was Venango County, with a total output of 945,951 barrels representing slightly more than five per cent. of the entire Pennsylvania production. Warren County, with 504,416 barrels, occupied third place. Production for the State as a whole showed a gain of 78,786 barrels over the production during 1939, which amounted to 17,355,841 barrels.

A spurt of 250,804 barrels in McKean County production accounted for the higher level for the State, serving to offset declines in production generally throughout the oil producing counties of the Commonwealth. Only two other counties, Armstrong and Elk, showed increases, and these were of a minor nature.

McKean County had 33,272 wells connected as of December 31, 1940, according to the report. This represents a reduction of 715 wells from the total connected as of the end of the preceding year. Venango County, with 24,059 wells connected at the end of 1940, ranked second in number of wells in operation. This indicated a reduction of 217 wells during the year.

The repressuring to obtain increased production of oil is now being widely used in various fields with success. In some fields, as

has been found to be the case in the Venango County field, water is not the satisfactory medium, as it has proved to be in the Bradford field, and in these other fields air or gas is being used with success. The Brundred Oil Corporation, Oil City, conducted exhaustive tests in several parts of Venango County, as well as in Kansas, repressuring with air, some years ago, and obtained very satisfactory results, greatly increasing the production of their wells.

In a paper presented before the Eastern District meeting, American Petroleum Institute, Division of Development and Production Engineering, at Oil City a few years ago, William J. Brundred, president of the Brundred Oil Corporation, said:

"Increasing oil production by repressuring oil sands that have been depleted of their gas pressure has been successfully carried on for more than 15 years. As the name indicates, the process, known as the 'Marietta' or 'Smith Dunn' Process, was first used near Marietta, Ohio. It is now being used in the majority of old oil fields throughout the country. In many of the old fields, the original rock pressure has become so depleted as to be of little effect in forcing the oil into pumping wells, and as a consequence, many wells are at the end of their economic life, unless repressured by air, water, or some other medium.

"In rejuvenating old properties, a question arises as to the relative efficiency of the two methods now being practiced; *viz.*, water flooding, as now used in the fields around Bradford, Pa., in comparison with repressuring with gas or air. The Bradford sands are fairly uniform; but, if water drives through a porous stratum more rapidly than through the rest of the sand, expensive equipment would be required to handle it, or the well would be abandoned without complete extraction of the oil from more compact portions of the sand. Air, however, traveling through such a stratum, can partially be controlled; and, in any event, nothing more serious occurs than an ineffectual wastage of air, while pressure can still be maintained on the inlet well eventually affecting the tighter portions of the sand.

"Properties with wells of compact sand require higher pressure, and take much longer to secure results than those of more porous sand. Wells of compact sand, with a barren stratum at the top, can be repressured successfully.

"It would appear that production once restored can be maintained within reasonable limits over a long period of years, if additional compressor capacity is added as the production curve declines. Cores indicate that the depletion of properties is largely of the gas rather than of the oil. Unit operation of pools would permit conservation of the gas; and, if recycled through the sand in wells carefully drilled and equipped as inlet holes at the time the pool was first opened up and before the gas was dissipated, it would seem reasonable to expect a gradual instead of a rapid decline of production.

"Actual distillation from cores show oil still in the sand, far in excess of that which has been removed; and, since repressuring with air or gas does not bank or drive the oil ahead of it, similar to a water-flooding operation, but rather passes through and assists the oil in its movement to the surrounding pumping wells, it would not seem unreasonable that air or gas pressured properties could be operated profitably for many years to come."

In January, 1942, it was said by the American Petroleum Institute, our domestic petroleum industry today is able to produce in eighty-two working days more crude oil than was turned out in the United States in all of 1918, the first full year of World War No. 1. In one record-smashing week of November, 1941, the United States petroleum producers turned out an average of 4,336,850 barrels per day, an all-time high, and the total outrun for the week exceeded total domestic output for the years from 1859 to 1869. This authority pointed out that the annual production of crude oil in all territory then under Japanese control in the Far East is equal to only about one day's production in the United States, while Germany and all Nazi-occupied countries have a total production equivalent to only eleven or twelve days' production at the November, 1941, peak rate.

An old adage says, "petroleum is where you find it," but seniors enrolled in petroleum and natural gas engineering at the Pennsylvania State College are being taught how to compute the odds in favor of a successful find.

By applying all known scientific methods of prospecting, the odds can be as high as one to one, says Dr. Sylvain J. Pirson, associate professor in the School of Mineral Industries. However, it is not often possible to do this, he adds, because it involves expensive electrical, magnetic, gravimetric, seismic, radioactive, geothermal and

geochemical measurements. "At least some of these measurements must be used, nevertheless, if the so-called wild-catter is to stay in business," he tells his class. "After computing the odds with the best methods at hand, the prospector then can follow a set mathematical formula devised by W. A. Whitworth in 1870, which weighs these odds against the prospective yield and the amount of the prospector's capital." The solution of this formula gives the break-even price of the chance of drilling a successful wildcat well which a speculator with limited funds can indefinitely take without the risk of going broke. In a review of prospecting methods, Dr. Pirson points out that the highly scientific methods of prospecting have come into use mainly since 1930.

In the present World War the petroleum industry is playing a most important part. Throughout the years a vast number of useful by-products have been developed from petroleum and now, with characteristic American ingenuity, many problems associated with the needs arising from the modern mechanized method of warfare have been and are being solved by the industry.

Army and navy officers have been invited to attend conferences with the officials and technologists of the petroleum industries which have been productive of beneficial results. One of the large industries states that today ninety per cent. of their annual \$5,000,000 research and development budget is devoted directly to the victory effort and the rest is devoted to it indirectly.

TNT, the basic military explosive used in bombs, torpedoes and shells, is made from toluol. Therefore, toluol is the one product that may be considered most essential to the destruction of the enemy. Ordinarily toluol has been a by-product of making coke, but in 1942 wartime requirements far exceed any possible supply from this source. Synthetic toluol is now produced from petroleum and one large plant, which went into full scale operation nearly two months before Pearl Harbor, multiplied by two America's production of toluol from sources hitherto relied upon. As an indication of how vital to our victory is this flow of synthetic toluol is the fact that three out of every five bombs with which our forces blast the enemy will carry TNT made from synthetic toluol. Other plants for the production of toluol are now in process of erection.

The development of one hundred-octane gasoline gives to our fighting airmen a great advantage in more power, or greater fuel economy, depending upon how it is utilized by the engines. There is a heavy demand for one hundred-octane gasoline and, to increase

their present production one company, it has been announced, is spending \$60,000,000 for new plants.

It has been said that "sugar has the unfortunate characteristic of being both good to eat and good to shoot with." During World War I, despite the fact that our sources of supply were not cut off, we had to conserve sugar so that it could be turned into alcohol, which in turn could be used in making powder and shells. Petroleum alcohol was a 1918 war baby, for it was discovered at that time by a chemist and has been produced ever since. It is said that the product saves three hundred thousand tons of sugar a year which would otherwise be needed for alcohol.

Rust, corrosion, oxidation is a most destructive enemy in peace time as well as war time, which costs the Nation millions of dollars a year. The importance of guarding against this evil is demonstrated by the fact that all of the aircraft factories in the United States find it necessary to protect with rust preventative highly finished metal parts, even if the parts are only to be moved from one department to another, or stand overnight awaiting further processing. In the United States Army it is required that tank engines which will remain idle for seventy-two hours or more be treated with rust preventative. Rust preventatives to meet all of the various conditions have been developed from petroleum.

Oil, even when specially treated, has the unfortunate characteristic of being sensitive to the temperature, thickening as the mercury drops and thinning as the mercury rises. This makes ordinary oil inadequate for use over wide ranges of temperature. The laboratories of the Standard Oil Company of New Jersey developed a product known as "Paratone," in the accomplishment of which they state that it was very much like finding a pearl in an oyster. Their laboratories found the "pearl" when they perfected a component from the oil itself, which, when treated in a special way and added back to the oil, brought the thickening and thinning under control to a great degree. The result is that "Paratone" has been enlisted for service on modern United States warships, planes and combat vehicles, all of which rely heavily on hydraulic mechanisms for various essential controls and operations. As an ingredient of hydraulic oils, "Paratone" prevents the oil from thickening to the point of locking the hydraulic mechanism when cold or thinning to the point of leaking out when hot.

Hydraulic mechanisms operate on the same principle as the hydraulic brakes of a car. Gun turrets on tanks are hydraulically operated, as are the stabilizers which keep the guns on an even keel for good aim

as the tank bounces over the rough ground. Modern United States Army guns employing light recoil mechanisms use a hydraulic medium containing "Paratone." Before such a product was available, it was not uncommon for a recoil mechanism to lock, disabling the gun in cold weather. "Paratone" was made available to other refiners in the United States in 1935.

Every torpedo, whether launched by submarine, plane, or warship needs a staunch lubricant on its spinning propeller shaft, else it might fail in its deadly mission. The grease must stick tight and not wash off in salt water. Also, it must not deteriorate during the long period the torpedo may lie idle before launching. Since 1937 the United States Navy has been supplied with a petroleum product which meets these requirements.

Pulleys over which airplane control cables operate turn on anti-friction bearings. If the pulleys don't turn, the cable will slide and in time will wear and break. Disaster may result. Even if the cable does not break, the controls will not operate freely. One good reason for the pulley not operating would be congealing of the grease in the bearings at low temperature or melting out at high temperature. In 1941 a petroleum grease was developed for the United States Army and Navy for use for control pulley bearings that would allow free movement at sixty-five degrees *below zero* Fahrenheit and which would stay in the bearings up to 150 degrees above zero Fahrenheit.

It has been said that "a good Spanish olive oil, some think makes paradise fruit out of head lettuce." But it also can make a good worsted wool cloth that the army and navy specify for uniforms. This odd relationship of salad dressing and uniforms stems from the fact that wool fibers must be tightly organized to produce good worsted cloth, and a little olive oil helps them slip into place. Spanish olive oil, no matter what the cost, was always considered the only good worsted lubricant, until war-drouth set a committee of wool manufacturers to looking for a replacement. As soon as this committee agreed upon and furnished specifications, the petroleum industry developed a new wool fiber lubricant with the result that United States mills still can make good worsted.

Using sealed chambers to simulate conditions which a plane rising seventy thousand feet (thirteen miles plus) would encounter, some plants are testing plane and aircraft engine accessories for stratosphere flying. Conditions call for temperature of sixty-seven degrees below zero Fahrenheit or lower and air pressure of slightly over one pound per square inch, as compared with fourteen pounds

at sea level. Equipment and instruments being tested required a special lubricant because conventional greases would get so stiff at this low temperature as to prevent bearings from turning. The manufacturer of the stratosphere chambers experienced great difficulty in finding the right lubricant which was finally accomplished by one of the petroleum industries.

We have heard many jokes about lice and cooties which infested the men in the army in World War I, but these vermin are a very serious menace. The so-called body lice carry the deadly typhus germ, feared by armies for centuries, and sometimes claiming more lives than battle wounds. A petroleum product has been developed which will kill lice, fleas, ticks, and chiggers, whether these vermin are on the skin or in the seams of the clothing. It has been turned over to the United States Army and Navy and to the British Government following tests which proved its high effectiveness.

Lifeboat lowering gear sometimes fails to work because salt water and spray have corroded the metal fittings. The United States Coast Guard averts such failure on its own ships by protecting lifeboat davits as well as all other deck equipment with a grease which not only fends off ocean salt but lubricates as well. This petroleum product was developed for the Coast Guard more than four years ago and it has been used by this branch of the service ever since.

With our army and navy carrying the fight to the enemy in far flung places on the globe, it is likely that for many of our men a canvas tent will be their home for a considerable period. Under certain conditions of weather, tents contract bad cases of mildew, which ruin the canvas and let the rain come in. By combining petroleum acids with copper, copper naphthenate was produced, which, when applied to tents and tarpaulins, gives them immunity to mildew. The United States Army is having its tents so treated today. In addition many army tents are also made waterproof and fire retardant with petroleum products developed for such purposes.

The present critical rubber situation confronting the Nation and the necessity for developing great quantities of synthetic rubber has resulted in a controversy over whether rubber should be made from grain alcohol or petroleum. The development of a large scale production from the use of farm products, it has been pointed out, would require the use of great quantities of critical materials needed for military purposes.

A recent survey made by a government representative of United States oil refineries discloses that idle refinery equipment which can be

assembled in some thirty different refining areas can by the end of this year (1942) be put to producing two hundred thousand tons of butadiene a year. This is the essential raw material that goes into synthetic rubber. Mix approximately eighty per cent. butadiene with twenty per cent. styrene, let them polymerize, or "build up" and Buna S synthetic rubber is obtained. The government's synthetic rubber program calls for the manufacture of Buna S synthetic rubber at the rate of seven hundred thousand tons a year, four hundred eighty thousand tons of it to be made from petroleum products. To produce the butadiene going into Buna S rubber, the Rubber Reserve Company has let contracts for the construction and operation of some twenty-four butadiene plants, producing an average of twenty-seven thousand tons of butadiene each, or a total of some six hundred forty-eight thousand tons.

Shell, Southern California Gas, Humble Oil, Atlas Oil, Koppers, Sinclair and Cities Service are each building one butadiene plant. Standard of Louisiana, Neches Butane and Rubber Synthetics are building two each, and Carbide and Carbon Chemical are building ten. First of the plants will start producing in September of this year and the last in August, 1943.

The building of these plants requires a lot of critical materials, particularly copper and steel. In fact, a large part of the drawback in expanding the synthetic rubber program has been the scarcity of critical materials for the plants. Therefore, the discovery of suitable butadiene refinery equipment already in existence is important because about thirty per cent. of the six hundred forty-eight thousand-ton productive capacity may not have to be built, or butadiene can be produced sooner than had been hoped for, or the butadiene and synthetic rubber programs can be expanded, or thirty per cent. of the critical materials scheduled to go into the butadiene plants can be diverted to something else.

The raw materials that will go into this butadiene production are distressed gasoline for which there is no market now, and butane, a refinery by-product gas. And not only will butadiene be produced, but also toluene for TNT explosives, benzol for aviation gas, styrene for synthetic Buna S rubber, and isobutylene, the raw material used in the making of the new "bathtub" or butyl rubber.

Secretary of Interior Harold Ickes, speaking of the idle refining equipment found, said: "It's like discovering a new oil well." He said the refineries could produce about two hundred thousand tons of butadiene a year, and that this quantity would be sufficient to make

from two hundred forty thousand to two hundred fifty thousand tons of buna rubber.

He also said about thirty nucleus plants will produce butadiene, but that altogether about seventy-five per cent. of the oil industry will contribute to the program. Approximately ninety per cent. of the equipment necessary for conversion will be second hand, he added.

A vast number of new chemical intermediates and finished products from petroleum, an extensive array of chemicals from other sources used in petroleum refining and significant improvements in the quality of items furnished for general public use are promised for the future as result of trends of research chemistry in the petroleum industry.

Hugh W. Field, assistant manager of the research and development department of the Atlantic Refining Company, stated in a report made public by the Philadelphia Section of the American Chemical Society that the "petroleum chemist, in the course of his working under tremendous pressure for national defense, is learning to make the chemical molecules in his crude petroleum jump through hoops," and with this knowledge will produce, in peacetime, materials for production of everything from perfume to plastics at lower cost and in greater abundance than ever before.

Crude petroleum, as it comes from the ground, is one of the most complex mixtures of organic chemicals known to man. In addition, crude oils from different locations differ widely in composition. The result of this twofold complexity is that a tremendous amount of study and research has gone into developing our knowledge of the raw material. "This knowledge is still surprisingly incomplete, but imperfect as it is, we see great things on the horizon which will result in an order of life which puts our present standards in the discard," says Mr. Field.

Just as the automobile engines of today would rapidly destroy themselves if operated on the gasolines and oils of the twenties, so the aviation and automobile engines of tomorrow will be designed to use fuels and lubricants now in notebooks and experiments of the refinery research worker and will result in performance characteristics which will advance transportation to new highs of efficiency and convenience.

The knowledge which produces a gasoline capable of propelling a pursuit plane in excess of four hundred miles per hour will definitely advance civilian transportation facilities when the world situation permits effort being expended in that direction.

The following is quoted from the publication of "The Oil and Gas Journal—The Oil City Derrick" at the time of the celebration of the diamond jubilee of the petroleum industry in 1934:

"Nothing man has taken from the earth has changed human life so quickly and so extensively as petroleum.

"Gold, sought through the ages, is but dead metal, an inanimate token for other things, goods and services, for whose utility it can offer in itself no substitute.

"Oil, on the contrary, is alive, pulsing with living power capable of being harnessed by man for a thousand beneficial purposes.

"The discovery of gold in California and Alaska enriched but a comparatively few. The discovery of oil lengthened the days and widened the horizon of mankind.

"The most marvelous of our surroundings are often treated as the most commonplace. Wireless, the airplane, the motor car. We see or we use them every day and think no more about them than the air we breathe or the water we drink which we have had always.

"Yet thousands now living can easily recall when these modern conveniences were undreamed of, when Langley's flying machine was laughed to scorn and steam rollers had to be preceded down the road by a man with a red flag.

"So slow is the world to recognize the possibilities of something beyond its experience. They had been finding oil in salt wells for years and salt men complaining about the nuisance of it. Later the oil producers were complaining about the nuisance of gasoline and the difficulty of disposing of it. Yet this despised fluid has become, it has been said not irreverently, 'God's greatest gift to man,' next to water.

"The pioneer oil men who flocked to Titusville could have no conception of what they were doing for the world. They naturally could see no further than possible personal gain. They could not even realize that the market for their oil was so limited at that time that each additional well completed was sending down the price. They would have been astounded could they have foreseen that the oil selling for \$20 a barrel would within two years sell for ten cents a barrel.

"Consider living conditions at that day. The railroads had not yet entered the oil region. The stage coach, the

covered wagon and the canal boat were not yet outdated. A 12 or 15 mile trip to the country town in many sections meant getting up at daybreak, having the women cook a noonday meal in the square and return by nightfall. Thanks to the discovery of oil 12 to 15 miles today is practically next door.

"When John D. Rockefeller was young, a biographer says, 'a candle burning in a cottage, the sound of horse's hoofs upon a dirt road, the muffled thump of the water wheel at the mill represented the light, power and transportation of America.' And to a great extent this was still true when oil was discovered. Some of the streets in the larger Eastern cities were lit by gas but the country as a whole depended on lamps and candles for the brief period between dark and bedtime.

"The Argand burners and glass chimneys burning whale oil were reserved for the well to do. The whale was the basis of the country's oil industry, centering around Boston, and supplying the fats for candles used everywhere. Coal oil had become the lamp illuminant by the time oil was discovered but it cost a dollar a gallon. In those days of enforced thrift the cost of lighting gave added point to the adage about 'early to bed and early to rise' making one healthy, wealthy and wise.

"The discovery of oil and the advent of kerosene supplanting costlier lighting made possible longer days. The world ceased 'going to bed with the chickens' and began to enjoy its evenings. An extra hour of leisure for improvement was an inestimable boon in those days of scant opportunities for either.

"It must rather shock modern America to realize that in the kerosene age the big market of the world was Europe. Our own population was not yet forty million, we had not yet struck our industrial stride, and our buying power was small compared to the wealth centered in Europe. American products were somewhat sceptically viewed abroad, with some of the Connecticut nutmeg flavor, clever, of course, but not so dependable, you know. But American kerosene made its way, not only in Europe but in Asia and Africa and Australia until travelers began reporting having seen American oil cans in the remotest parts of the earth, in Tibet and Timbuctoo.

"Meanwhile no one suspected that the lighter fractions, considered a nuisance and stealthily dumped into the creek, would some day create a still larger market for American oil.

"In 1879, George B. Selden filed a patent on a device for driving a vehicle by an internal combustion engine. Otto, a German, had invented a four cycle internal combustion engine in 1876 and a few years after Selden's application, Daimler, another German, perfected an ignition system. Carl Benz, two years later, built a car that was actually driven by gasoline. In 1893 George Duryea, its inventor, drove the first American automobile along the streets of Chicopee Falls, Mass. The horseless carriage had arrived.

"Even then no one imagined the development that was to come. A generation accustomed to walking, riding the horse, cable or new trolley cars to and from work, occasionally indulging in the luxury of a buggy ride and viewing a railroad journey as more or less of an event, regarded the horseless carriage as a freak and then as merely a potential successor to the family carriage to be enjoyed only by the wealthier.

"Stocks of railroads and electric railways were gilt-edged investments. Who could imagine that the new invention would threaten the profits of the one or drive the other off the streets for lack of patronage? Had anyone predicted that Tom, Dick and Harry would be driving to and from work in one of these contraptions, that the entire family one day would board 'the old bus' and set out across the continent, the prophet would have been rushed to the asylum.

"Even the oil industry, intent upon its kerosene market, had no inkling of what was to come until it was upon it. The early motorist got his gasoline where he could, at the corner grocery or wherever he found it.

"The early automobile races drew crowds in the grisly expectation of seeing somebody get killed. Every outing was an adventure. You might get there but you might not get back. The multitude of things that could go wrong with one of those early cars was infinite.

"But the number of cars increased and their quality improved. Their cost, too, came down. Venturesome people who accepted an invitation to ride never got over wanting one of their own until they managed it.

"About this time we had our little difficulty with Villa and General Pershing took what was probably our first army on

trucks into Mexico. A little earlier General Gallieni had assembled the garrison of Paris on the taxicabs of that city and driven out to help repulse the invaders.

"But before that we had a half million cars in the United States. Gasoline was coming into its own. Filling stations were beginning to dot the landscape and the cities and the oil industry knew that kerosene had been dethroned.

"By the time the war was over the swain who could not take his girl out for a motor ride was hopelessly outclassed. And so we rode into the 'New Era' with all its dire consequences, the greatest 'joyride' in history.

"But the economic effects of the motor car and truck were as far reaching as the social. The mobility of manpower gained by putting the American people on wheels has infinitely increased our industrial and commercial efficiency. The movement of goods has been enormously accelerated and the scope of service tremendously expanded by the motor truck.

"Trade has been intensified and spread as the nation has been drawn closer together and at the same time more widely scattered by this ease in transportation. Where a visit to Chicago, California or Florida was once a life time remembrance it is now within the command of any owner of a car. The farmer is no longer isolated nor the city dweller confined within the narrow purview of his own neighborhood. Nothing in history ever started so many people moving as the discovery of oil.

"Individual transportation, however, boon though it be, may prove no greater than others yet to come. The Diesel motor ship and the Diesel electric train are but the beginning. We have hardly tapped the possibilities of petroleum for power. The farm tractor and the gasoline motor are but the precursors of power plants that loom in the future, powered by oil.

"The really marvelous thing about oil is our inefficient use of it. Even in our finest motor cars it is admitted that we use but a fraction of the potential energy contained in the gasoline. Only the other day Henry Ford told an interviewer that 'automobiles today are in the oxcart and corduroy road stage of development. It almost frightens me when I look ahead and see how far we've got to go.'

"If that is so of the development of the gasoline motor what can we expect from the further development of the other

utilization of oil for power, for heating, for chemical and medicinal and all the other purposes into which the many products of oil enter.

"Look at the development of natural gasoline—the utilization of bottled gas bringing fuel to the most isolated places. Consider the expansion of natural gas distribution, a thousand miles from the wells. Take the discovery of helium. What benefits may lie hidden in the composition of petroleum awaiting the magic touch of science to bring them forth!

"Without oil we might never have known that man can fly. Both the dirigible and the plane depend upon oil for power. Without that 'ocean of oil' on which Curzon said the Allies floated to victory who can guess how or when the war would have ended? Where would we have found lubricants for the vast industrial machinery of the modern world?

"Where would the two millions employed in the oil industry have found employment and the other millions whose employment depends upon the oil industry in the manufacture of automotive vehicles, in the manufacture of the steel, glass, tires and other parts of the car and truck and bus, in the building of highways and the countless other enterprises that owe their existence primarily to our having found oil?

"Not only does the oil industry supply power for the car and truck but it furnishes the carbon black that is essential in tire making, the asphalt and road oil used in the construction and maintenance of the streets and highways upon which the cars and trucks run, and it also, through the taxes paid on gasoline, pays for these highways which would otherwise be unneeded and unbuilt without it.

"The revenue obtained from oil is the chief item in the upkeep of great states and the diversion of the tax on gasoline adds many millions to the revenues of others. Including the taxes levied on motor vehicles which of course would be non-existent without the oil industry. The discovery of oil made possible the turning into the public treasuries of more than a billion dollars a year.

"Since the Drake well over thirteen billion dollars have been invested in the oil industry. Less than 60 per cent. has ever been recovered through the sale of crude oil. That is the hazard of the business. Yet the public, hearing only of spectacular successes, takes no account of the obscure losers who have so often sunk their all in a hole in the ground.

"The story of the oil industry, more than that of any other, has been checkered by triumphs and tragedies. Andrew Carnegie once said that the steel industry was 'either a prince or a pauper.' But it can show no such vicissitudes as the oil industry. Its raw material ranged from \$20 a barrel after the discovery to 10 cents a barrel within a couple of years. Excepting during the war when the Allies were drawing upon America for oil there has never been a shortage. Usually there has been over-production, as at present. But the magnitude of the industry and the demand upon it have required almost constant search for future reserves. It has been calculated that the drilling of some 20,000 wells a year is required to assure a supply over a period of years ahead, the normal reserves demanded by ordinary business prudence in view of the investment.

"More than 2,250,000 investors have a stake in the petroleum industry. An annual expenditure of more than \$500,000,000 is required to drill the 20,000 wells needed to maintain the reserves. Compared to the average annual investment in the steel industry, for example, this is five times as large.

"Yet, notwithstanding the exceptional hazard in the finding of its raw material and the heavy investment required to maintain the supply, the oil industry has consistently sold its products to the consumer at a lower price level than all other commodities, a feat attested over a long period of years by government statistics. It has sold its chief product so cheaply that the Federal and State governments have been able to levy a tax as large as the return to the producer of the crude and the manufacturer of the gasoline together.

"All this, moreover, based upon the depletion of an irreplaceable raw material, a fact that ordinarily would call for higher return on the greater risk. This is not the least of the peculiarities of the oil industry. It may be the fatalism in the blood of every wildcatter which lures him to 'shake dice with Destiny.'

"Possibly it was a recognition of the pass to which the industry was being brought by this idiosyncrasy that led the government to single it out in the recovery program for a treatment all its own. After 75 years it seemed as much in need of a guardian as in the days of Pithole, since it was allow-

ing the same errors to produce the same disastrous effects. Happily, as the Diamond Jubilee anniversary approaches, there are encouraging signs of a new sanity in the oil business. The event may be a double celebration, commemorating the birth of the industry and ratifying its stabilization as a business and not a game."

The Drake Well Memorial Park, a State of Pennsylvania Park—From 1859, the year in which Colonel Drake drilled the first well for petroleum in Venango County, near Titusville, until 1931, little was done to mark the site of the first oil well. However, in 1931, a group of historically-minded citizens in the oil region took the matter up with the American Petroleum Institute, asking that it provide for the adequate and permanent maintenance of the site.

The institute agreed to undertake the assignment upon certain conditions, one of which was that, when completed, the Commonwealth of Pennsylvania should accept title to the property as an historical park and appropriate an annual sum for proper maintenance. Furthermore, the institute appointed a committee to coöperate with a local committee in the execution of the project and appropriated the sum of \$60,000 to defray the expense.

In 1931 a bill was introduced in the State Legislature by which the State accepted title to the park property, when completed, and placed it under the jurisdiction of the Pennsylvania Historical Commission. This bill was passed and approved.

The committee of the American Petroleum Institute and the local committee secured for the park about twenty-four acres, including the one acre of land on which the original Drake well stood; they built a two thousand-foot retaining wall to keep the property from being flooded; they cleared the land of the undergrowth and filled in; they secured the extension of water, gas and electric lines to the property; they built a caretaker's house and a small museum building, which included room for all kinds of relics relating to the Drake well and early oil history and, at one end, a small library.

In March, 1934, a caretaker was appointed by the Commonwealth and the Commonwealth assumed responsibility for the park. All of the letters, books, records, photographs, documents, newspapers, and relics relating to the Drake well and early petroleum history, which had been previously collected and stored, were placed in the Drake Museum. This formed a very valuable nucleus of research materials. The control over the park and museum was soon trans-

ferred from the Pennsylvania Historical Commission to the Department of Forests and Waters because the commission did not have the proper facilities for looking after the park—the grass, trees, shrubs, etc. It is now under the control of this department.

Since 1934 the historical materials, documentary and otherwise, have grown. Various persons have sent letters, records, books, photographs, relics, etc., until, at the present time, it has the best collection of research materials in the country on the early beginnings of the petroleum industry. It is hoped that it will continue to grow and become increasingly important as a center for the study of oil history.

The Pennzoil Company—Twenty-seven years after Colonel Edwin L. Drake drilled the world's first commercial oil well in 1859, and yet six years before Charles B. Duryea built his first horseless carriage, three practical Pennsylvania oil men founded what today is The Pennzoil Company, the largest organization in the world devoted primarily to the refining and marketing of Pennsylvania motor oil.

The three pioneers of a new gigantic industry that was to sway the destinies of nations organized The Penn Refining Company under the laws of Pennsylvania in 1886, with Henry Suhr, chairman, Samuel Justus, secretary and treasurer, and Louis Walz, manager, the capital stock issued being \$40,000. They built their refinery only twelve miles from where Colonel Drake's drill signaled a new world era in transportation and where stands today what is known locally as Plant 2, an important unit of the Pennzoil refineries now dotting famous Oil Creek.

Since kerosene enjoyed the greatest popular demand for lighting, heating and cooking, the 250-barrel-a-day refinery was built solely for its manufacture, with gasoline, benzine and residual oils as by-products. It remained primarily a kerosene refinery until 1904, when new equipment was added for the refining of lubricating oil. So great was the demand that two years later, in 1888, the capacity was doubled to five hundred barrels a day and a barrel factory constructed in the meantime, it being the custom to ship about eighty per cent. of the output in wooden barrels. The latter were put together by hand after ox teams had hauled their cargoes of white oak staves from nearby lumber mills. Following the disastrous fire and flood in 1892, in which the refinery was partly and the barrel factory completely destroyed, tank cars were purchased, which sounded the death knell of this particular part of the refinery.

In 1893 another expansion of refining facilities took place with the acquisition of the five hundred-barrel-a-day plant known as the Valley Oil Company, located at Rouseville, approximately one mile farther up Oil Creek from the original site. This unit had been built as the Nonpareil Refining Company in 1886 by John Davis, who sold it in 1889 to a corporation headed by S. R. Gray, Oil City, president; J. C. Long, Warren, Pennsylvania, general manager; and Mart Hoffman, Oil City, secretary and treasurer. Stockholders were located in Oil City and Warren, Pennsylvania. At the same time the name of the concern was changed to the Valley Oil Company and facilities were installed for the refining of lubricating oil, the plant having originally been constructed for the manufacture of kerosene. This company operated until the summer of 1893, when it became involved in financial difficulties and was purchased in December by the Penn Refining group and its associates and a new corporation was formed, known as The Germania Refining Company. Conrad Simmons, C. H. Duncan, E. McCracken, Louis Walz and Henry Suhr bought the entire property and business for \$50,000. This refinery was located in Rouseville, where the Pennzoil Crude & Lubricating Oil Plant now majestically stands, with its ten thousand-barrel-a-day capacity.

Officers of the Germania Refining Company upon its organization were: C. H. Duncan, president; Henry Suhr, vice-president; W. R. Duncan, treasurer; Conrad Simmons, secretary; and Louis Walz, manager, the latter assuming the same position he held in the Penn Refining Company, both companies occupying the same office. The board of directors of Germania Refining Company included C. H. Duncan, E. McCracken, Conrad Simmons, Louis Walz, and Henry Suhr.

It was at this time that D. J. Cavanaugh became associated with this group as bookkeeper, a position he had held with the Valley Oil Company and from which he advanced to important posts until his retirement as director and secretary from The Pennzoil Company in 1935. More than a year before, in September, 1892, Charles L. Suhr, son of one of the founders, started his long and outstanding oil career by going to work for the Penn Refining Company and advancing from one position to another until his election to be president of Pennzoil in October, 1916, and subsequently to be chairman of the board, which position he still holds.

The two refineries progressed and gradually expanded their manufacturing facilities in timely coordination with expanding mar-

kets for kerosene and stove gasoline. Branches were established by Penn Refining at Rock Island, Illinois; Sioux Falls, South Dakota; Minneapolis, Minnesota; Davenport, Iowa; and were maintained until the advent of new oil fields in Oklahoma and Kansas, which made them uneconomical—hence their sale to the Sinclair Oil Corporation.

In 1901, L. D. Fulton, born and schooled in Titusville, the cradle of the rapidly growing oil industry, joined Germania Refining as an engineer, and over a period of forty years was conspicuously identified with the many improvements in refining methods which characterized The Pennzoil Company. He had served more than thirty years as general superintendent of refineries when he died April 2, 1941.

Growing demands for industrial oils caused Messrs. C. L. Suhr, D. J. Cavanaugh and others to become financially interested, in 1908, in a small marketing company, The Oil City Oil & Grease Company. In 1909, R. A. Browne, regional sales director of Atlantic Refining Company, with headquarters in New Castle and covering northwestern Pennsylvania, resigned from this position and along with Mr. Suhr and Mr. Cavanaugh, purchased the interests of all other stockholders and immediately set out to capture an impressive share of the new markets being discovered for lubricating oil. In addition to great expansion in the industrial field, these pioneers in quality motor oil had already recognized the growing importance of motor oil. The first brand was known as "Merit," but most emphasis, until 1917, remained on industrial lubrication.

The same year, 1909, that recorded the association of Mr. Browne with the marketing group, also marked the entrance of M. A. Brewster to the refining unit. He joined the Penn Oil & Supply Company, Penn Refining Company subsidiary, as an accountant, and became treasurer of Penn American in 1918. He subsequently held that position with Pennzoil until 1937, when he was elected vice-president and treasurer.

Indicative of the general development of motor oils was the founding in Los Angeles, in 1913, of The Panama Lubricants Company, which specialized in motor lubricants and gradually extended its activities throughout the eleven Western States. L. H. Johnson was president and N. M. Day vice-president and sales manager.

The motor oil was marketed under the brand name of "Panama," and like the brand "Merit" in the East, was not deemed suitable; hence the name Pennsoil was selected to replace both names. Since customers began calling the new product Penn-soil, the "z" was substi-

tuted and the name of a company was born. In 1921, The Panama Lubricants Company became The Pennzoil Company (California), and The Oil City Oil & Grease Company became The Pennzoil Company (Pennsylvania).

It was during this period of early expansion that W. S. Zehrung became associated with Pennzoil. In 1919 he entered the company's employ as a chemist and moved successively through the positions of chief chemist, assistant superintendent of refineries, sales engineer, manager of lubricating sales, general manager, vice-president and, since 1937, has been president.

The newly formed Pennzoil Company continued to expand its operations to branch offices and bulk plants throughout the East and West, including gasoline service stations in western Pennsylvania and upper New York State. The latter accomplishment was made through acquisition of the Warren Oil Company of New York in 1922, whose bulk plants and service stations covered the area from Buffalo to Albany. These properties, along with a gasoline terminal at Newburgh, New York, were sold in 1926 to the Beacon Oil Company and others, and Pennzoil confined its efforts to lubricating oil, with the sale of gasoline limited to western Pennsylvania, eastern Ohio and West Virginia.

So well did the quality of Pennzoil products meet the requirements of an automobile industry that was just beginning to feel its growing pains, that two outstanding movements were made, namely, the consolidation in 1922 of all marketing and refining companies under one concern, The Pennzoil Company, and introduction of national advertising in 1924. Previously The Penn Refining Company was formally merged in 1914 with Germania Refining, and the latter's name changed, in 1917, to The Penn-American Refining Company.

Although the refining capacity had by this time reached a daily figure of three thousand barrels, it was insufficient to fill the requirements of what had now become a national marketing organization. In order to obtain sufficient crude oil and to guarantee a permanent source of supply to meet all demands for the future, an affiliation with The South Penn Oil Company, the largest producer of Pennsylvania crude oil, was made in 1925 and, in 1928, the refining capacity was increased to ten thousand barrels daily. Executive headquarters were moved from Rouseville to Oil City.

Since then "Pennzoil" has become a household word for high quality, one hundred per cent. Pennsylvania motor oil not only in

every county in the United States, but also in the majority of foreign countries.

Officers and department heads of the company today are as follows: C. L. Suhr, chairman; W. S. Zehrung, president; M. A. Brewster, vice-president and treasurer; D. W. Grant, vice-president; R. A. Browne, secretary.

W. J. Dempsey, assistant treasurer; J. F. Vandeventer, assistant secretary; F. W. Alcorn, general auditor.

Victor Benson, manager lubricating sales; J. G. Miller, manager gasoline sales; E. F. Johnson, advertising manager; D. G. Proudfoot, sales engineer.

A. A. Steffan, counsel; A. W. Clinger, purchasing agent; D. E. Carrier, traffic manager; M. L. Meddock, credit manager.

J. M. Hinman, superintendent Plant 1; D. J. Harvey, superintendent Plant 2; J. C. Grosser, chief engineer; T. J. Harkins, chief chemist.

Quaker State Oil Refining Corporation—The Quaker State Oil Refining Corporation was incorporated June 19, 1931, the result of a merger which brought under one corporation a total of nineteen separate marketing and refining companies. The principal companies of this group were Quaker State Oil Refining Company of Oil City, Pennsylvania; Emlenton Refining Company, Emlenton, Pennsylvania; Ohio Valley Refining Company, St. Marys, West Virginia; Independent Refining Company, Oil City, Pennsylvania; McKean County Refining Company, Bradford, Pennsylvania; James B. Berry Sons' Company, Oil City, Pennsylvania; Sterling Oil Company, Emlenton, Pennsylvania; Enterprise Oil Company, Buffalo, New York; and the Quaker State Oil Company of California.

One of the oldest companies in this group was the Enterprise Oil Company, which was founded in 1884. At this plant are produced Duplex marine engine oil and Kasson waterproof greases, as well as Quaker State greases.

The Independent Refinery was organized in 1880 and the James B. Berry Sons' Company was organized in 1890 and became internationally known for reliability and integrity, specializing in complete petroleum products of service to jobbers and wholesalers.

The Emlenton Refining Company was started in 1894 and four years later the Sterling Oil Company was incorporated and kept itself progressively engaged in the Pennsylvania oil industry and now maintains filling stations and bulk plants throughout western New York State, western Pennsylvania, southeastern Ohio and West Virginia.

The Ohio Valley plant was established in 1916 while the McKean County Refining Company erected a plant at Farmers Valley near Smethport in 1923 and was purchased by the Quaker State Oil Refining Company in January, 1930.

World-wide reputation for quality products has been attained through the patient building of pioneers in the oil industry. The foundation stones of the Quaker State Corporation are buried deep in the history of oil.

The dramatic history of Quaker State would hardly be complete without some reference to those courageous men who played such an important part in the Pennsylvania oil industry from its very beginning—men who strove to produce from world famous Pennsylvania grade crude oil only petroleum products of the highest quality. The high ideals of these hardy pioneers have been a tradition with Quaker State. Quaker State traces the quality of its products back to humble beginnings, the high ideals of these early oil men and on up through half a century of experience and research in the steady development of skillful refining methods.

Quaker State first started marketing motor oil when motor cars were still in the horseless carriage era. The story is well known of how the pioneers of the new type of automobile engine, which operated best at temperatures so high as to be practically unheard of in those early years, were nearly desperate because they could not find an oil which would stand up in their engine for more than a short period of time. A young superintendent in one of the small Quaker State Refineries developed a new and improved process which produced an oil which was highly successful in this new type of high temperature engine. Quaker State was first made to solve a difficult problem and skill and experience have enabled Quaker State to meet the increasingly exacting requirements of the present day high speed high compression motor.

Quaker State distribution and distribution facilities have kept pace with its popularity so that it may be obtained today from the dealers throughout the United States, Canada, Mexico and many foreign countries.

H. J. Crawford, of Emlenton, is president of the Quaker State Oil Refining Corporation; Samuel Messer, vice-president; W. R. Reitz, secretary and treasurer; and H. H. Lowrie, assistant secretary and treasurer.

The directors are: H. J. Crawford, of Emlenton; H. H. Lowrie, of Oil City; G. B. Hunter, of Emlenton; W. K. Bayer, of Erie; J. M.

Koch, of Oil City; T. B. Gregory, of Pittsburgh; W. R. Reitz, of Oil City; S. Messer, of Oil City; and J. D. Berry, Jr., of Oil City.

Several other men, now deceased, who were instrumental in forming and actively engaged in directing many of the companies which were later merged to form the Quaker State Corporation, include: James D. Berry, Oil City; Charles D. Berry, Oil City; E. P. Theobald, Oil City; and J. P. Flynn, Sistersville, West Virginia.

The Pennsylvania Grade Crude Oil Association, with administrative offices in Oil City, Pennsylvania, is an oil trade organization, representing producers, refiners, and marketers, which was set up in 1923 to promote the sales of products made from Pennsylvania grade crude. Since that time more than two million dollars has been spent in advertising the merits of Pennsylvania oils to the consuming public. A companion program of research looks toward the improvement of processing these oils and more efficient methods of recovery of the crude. A third branch of the program endeavors to protect the buying public through inspection of branded oils on the market.

Petroleum and Synthetic Rubber—Petroleum refiners have been making costly and exhaustive efforts to make rubber from petroleum for twelve years or more and apparently have achieved success.

One large refining company states:

"The degree of our success is indicated by the fact that the United States now can replace natural rubber with synthetic rubber, the volume depending upon how much steel and other construction materials and labor are made available for the special plants. The raw material, crude oil, is plentiful in this country."

The daily transport of thousands of war plant workers to their jobs by bus or car is directly related to the winning of the present war, and the serious effect of immobilizing these workers through lack of tires is recognized by all. Also, it is recognized that forty-eight thousand towns and villages in our country are now wholly dependent upon automotive transportation for contact with the rest of the world. How traditional American ingenuity will prevent the immobilizing of our workers and the isolating of these communities, we cannot say at the present time, but as ever in the past, a solution of the problem shall be found.

If new rubber is the *only* solution, the United States can make as much synthetic rubber as is needed, provided that sufficient steel and other vital materials are diverted from other war needs for the plants. This becomes a matter of balancing one need against another, and demands a decision which only our government can make.

While civilian needs may not be provided for now and personal convenience must give way to national defense, it is a satisfaction to know that military needs can be filled with synthetic rubber.

One large refinery, at the present time, is making thousands of pounds of synthetic rubber (Perbunan) every day. All of this product, which is a specialty type, not tire rubber, is being used in building tanks, planes and other war machines. The product is superior to natural rubber for fuel lines, engine mounts, airplane cabin-sealing compounds, gasoline tanks, gaskets, and many other parts. "A large bomber, for instance, may have several thousand synthetic rubber parts," it has been stated.

Experiments with another synthetic rubber, Butyl, are being vigorously prosecuted. A small experimental plant produces 170 pounds of this product daily for experimentation, which may give us an even better solution to the rubber shortage problem than we now have. In June, 1941, a large refining company started construction of a large scale Butyl rubber plant which has since been taken over by the United States Government.

It has been stated that the one-million-ton-a-year synthetic rubber program being developed by the government provides for the production of much Buna S made by the process purchased by a United States refining company from a German company. More than fifty thousand tons a year will be Butyl rubber made by a process discovered by a United States refining company in 1937 and developed ever since.

To the vast number of by-products developed from petroleum which have contributed in such diverse ways to man's advancement, comfort and accomplishments, it is anticipated that many more, perhaps even of still greater value, will be added. A prominent chemist has stated: "A new chemistry is being born in the Nation's petroleum laboratories."

Federal and State Governments Endeavor to Stimulate Oil Production—The effort to stimulate crude oil production in the Appalachian oil fields has been centered in Franklin, where on April 15, 1942, the Petroleum and Natural Gas Division of the Bureau of

Mines, United States Department of the Interior, established a field office. Dr. R. R. Sayers, director of the bureau, stated that the purpose was to stimulate crude oil production in Appalachian fields for the war program and to promote conservation of petroleum.

Under the direction of C. J. Wilhelm, a petroleum engineer, the Franklin office was opened with a staff of five technicians, in response to requests from operators and others connected with oil field development in the region. The office is located on the third floor of the Galena Building, and six office rooms are being utilized for its work, including a laboratory.

At the time announcement was made of establishing the office in Franklin, Ralph K. Davies, deputy petroleum coördinator, commented that: "A substantial increase in crude oil production in the Appalachian area during the next year will have an important bearing on the successful prosecution of our war effort."

Establishment of the new field office was endorsed by Secretary of the Interior Harold L. Ickes, the Office of Petroleum Coördinator, the Pennsylvania State Congressional delegation and by the Pennsylvania Grade Crude Oil Association, of which the late J. E. Moorhead was executive manager. While in Washington to attend a hearing in connection with petroleum problems, Mr. Moorhead died suddenly on August 10, 1942, the industry thereby suffering the loss of a man who had been rendering very valuable service.

Bureau engineers will consult with operators and point out engineering precepts applicable to existing conditions in secondary recovery projects—oil properties which are partly depleted and which produce profitably only when certain stimulative methods are used. Other studies, all designed to aid in maximum recovery of crude oil with a minimum of expense, also will be conducted by the office, Dr. Sayers stated.

After studying production problems first hand, the office prepares reports on its findings. The staff is in close coöperation with operators, the Pennsylvania State Geological Survey, the School of Mineral Industries of Pennsylvania State College, and other agencies and groups that are studying technical problems in the Appalachian fields. The laboratory will make core analyses and conduct other tests connected with petroleum problems. The work of the Franklin branch covers the entire Appalachian field, from southern New York to Kentucky.

Mr. Wilhelm came to Franklin from Bartlesville, Oklahoma, where he was associated with the petroleum experiment station of

the Bureau of Mines there. A native of Pennsylvania, Wilhelm was graduated from Penn State College in 1927 and has been with the bureau since 1929. In addition to studying secondary stimulative recovery methods, he has investigated oil field brine disposal problems in mid-continent oil fields and has written several technical papers on various operating phases and problems of the industry.

Also on the Franklin staff are S. S. Taylor and E. M. Tignor, both petroleum engineers of the bureau. Taylor, a graduate of the University of Alabama, has studied chemical engineering as applied to petroleum field problems at the Bartlesville station. Tignor, formerly of the Laramie, Wyoming, experiment station, is a graduate at Oklahoma Agricultural and Mechanical College, and has specialized in studies of natural gas engineer problems and underground behavior of reservoirs.

Thomas Jennings, of Titusville, a graduate of Penn State College, in petroleum engineering in 1942, and Clyde W. Elder, Jr., of Sligo, a petroleum engineering graduate from Pittsburgh University in 1942, are also members of the technical staff, and Helen Faulder, formerly a secretary in the technological branch of the bureau in Washington, District of Columbia, is clerk in the office. The establishment of this field office by the government stresses the importance of petroleum and especially of the Pennsylvania grade crude oil, and it is anticipated that the services of the office will be of great value to the industry.

Franklin was selected as headquarters after the bureau made a careful study of available office space as regards proximity to the Appalachian oil fields, which are sources of high-quality lubricants and other essential petroleum products.

Under date of August 13, 1942, Internal Affairs Secretary William S. Livengood, of Pennsylvania, declared "there is a good chance" that increasing activities of the State Geologic Survey in Pennsylvania's oil fields may result in "immense benefit to the gasoline rationed eastern states."

Livengood disclosed that Dr. George H. Ashley, chief State geologist, is mobilizing his staff for an intensive study of many oil-producing areas never before surveyed in detail. Purpose of the study, he said, is to "increase the flow of Pennsylvania crude oil . . . by assembling information that will assist operators to make the best use of money and material."

Livengood pointed out that Pennsylvania crude "not only contains 10 times as many quarts of lubricating oil per barrel," but the

lubrication oil can be refined easily into a stable product meeting all the special requirements of the radial engines used in both tanks and airplanes.

In addition to its independent work, Livengood said, the State survey is now coöperating with the recently established United States Bureau of Mines Petroleum Experiment Station at Franklin and with Pennsylvania State College's School of Mineral Industry.

While none of the surveys have yet turned up any new oil flush fields, Livengood explained, they have showed the operators where it would be profitable to prospect, thus saving them much time, material and money. He added, however, that there still is hope that completely new pools will be discovered to supplement the output of existing wells.

Meantime, the industry is doing its utmost to increase production so it can earn a twenty-five-cent-a-barrel increase on the present Federal price ceiling. Representatives of the petroleum industry in Pennsylvania gained an initial twenty-five-cent increase in the ceiling and the Office of Price Administration promised the additional twenty-five cents providing production was increased substantially.

Livengood explained that the first increase was granted after OPA was shown data compiled by the State survey showing that "the state could furnish a very large portion of the lubricating oils required by our armed forces and those of our Allies, if given a chance."

In addition, he said, "the difficulty in transporting petroleum to the east and the large and growing demands for aviation lubricating oil, together with the demonstration that Pennsylvania and adjoining states can increase their production substantially, have led the war production board and the office of petroleum coördinator to accord the oil producers of those states exceptional privileges."

Plans are now under way for one of the largest war projects to be constructed in this area. The details of the project are still, at this writing, shrouded in secrecy, but it is generally known that The Pennzoil Company, in coöperation with the Quaker State Oil Refining Corporation, the Wolf's Head Oil Refining Company and the Continental Refining Company, all of Oil City, are making extensive alterations and additions to their jointly owned cracking plant facilities and, in coöperation with the government, they are erecting additional new facilities for the manufacture of one hundred-octane aviation gasoline.

The Pennzoil Company will operate the plant upon its completion and during the construction are supervising the general engineering.

The Petroleum Industry Makes Another Contribution to the Nation's Solution of War Problems—To quote Howard W. Blakeslee, "Wild World" science editor, "The fish, the whales and the hogs don't know it, but they are indirectly responsible for a new savings of countless thousands of hours in making American planes, tanks, ships and guns."

The huge time saving comes from a new cutting oil, the lubricant used to cool metal while high-speed tools smooth, slice and drill the war parts. The oil is announced by the Gulf Oil Corporation, and is a synthetic.

The secrets of this oil came mostly from fish, whales and hogs. Fish oil until recently was the principal cutting oil in industry, and Gulf laboratory scientists analyzed this and the other oils for the peculiar properties needed.

Four main qualities were found, and then synthesized, as fish and whale oils are war scarcities and hogs are needed for bacon. First was penetration; the oil has to go where water and other thin liquids would never leak a drop in a week.

Second is cooling; the oil is cool because it has qualities for absorbing heat, and also because of the quick way it gets close to metal, due to penetration and to wetting ability. This wetting ability is another of the special qualities, and means rapid spread. The spreading of water is the classical example of wetting ability. In that respect oil is wetter than water.

The fourth big quality is film strength; this means that a film of liquid oil, thinner than tissue paper, becomes, when under pressure, almost as tough as steel.

Spectacular demonstrations include—a steel surface, covered with an old-type cooling oil, across which a machine tool cutting point was moving at one hundred feet a minute. A plume of smoke rose from the tool's point. The new oil was substituted, the cutting speeded to three hundred feet a minute, and there was no sign of smoke.

The life of some aluminum-working tools was extended by the oil from three hours to eleven between grinds. The oil makes it possible to machine aluminum so smoothly that in many cases no polishing is needed, thus eliminating one operation. Several aluminum-working shops have set new production records attributed to the new oil.

The petroleum industry has produced and continues to produce vast numbers of products useful to man and has solved numerous industrial problems, sometimes with revolutionary results, while it seems there is no end to the contributions which petroleum chemists and engineers, working magic with this most remarkable of nature's products, are able to make.

Undoubtedly, with the ending of the war, many changes and readjustments will be necessary, but oil will be one industry which will carry on; it supplies the one commodity we crave next to food, clothing and shelter. And as a world-wide mechanized war is today clamoring for Pennsylvania oil, so will the superior quality of Pennsylvania grade crude oil assure a constant demand for the products derived therefrom for peace time needs, and the petroleum industry will continue to furnish the types of oil products required for the various purposes.

To mention all of the refineries which have operated within the region down through the years would be, perhaps, of little interest to the reader; changes in ownership, consolidations and other factors have eliminated many of the early refineries.

In addition to those already mentioned, others now operating within the region include the Kendall Refining Company at Bradford; the United Refining Company at Warren; the Bradford Penn Refining Corporation at Clarendon, Warren County; the Cities Service Oil Company at Titusville; the Continental Refining Company, Crystal Oil Works and Wolf's Head Oil Refining Company, Inc., at Oil City, and the Franklin Creek Refining Corporation at Franklin, a subsidiary of L. Sonneborn Sons, Inc., of New York, who also have a refinery at Petrolia, Butler County.

Some Leaders of the Early Petroleum Industry—Perhaps no other section of our great country has given more men distinguished for their accomplishments in various walks of life, and nationally known, than has the Pennsylvania oil region, and particularly those associated in various capacities with the petroleum industry. Franklin, the county seat of Venango County, wherein the first well was drilled, on account of the many men from that city and county who achieved prominence, was called, at first perhaps sarcastically, the nursery of great men and, for many years the leading social club, now known as the Franklin Club, was known as the "Nursery Club."



Torpedoed Well, Bradford

The development of the oil industry in Venango County afforded an opportunity for a large combination of capital profitably to engage in the business, and led to the formation of the Standard Oil Company, the most gigantic combination of capital of modern times; and the lawyer who directed its legal affairs and guided it successfully through the many legal complications which necessarily arose, was one of Venango's favorite sons, who was born, reared, read law, and started upon his career in Venango, and was recognized as one of the greatest lawyers of his time. This was S. C. T. Dodd, the general counsel for so many years of that vast corporation, and the author of the famous "Trust Agreement," a remarkable document that was the model of the many similar ones that followed in various lines of business. Mr. Dodd died January 30, 1907, at his winter home in Pinehurst, North Carolina, and his remains were brought home to his native Franklin and there interred.

It is, too, something of a coincidence, that the lawyer who was the leader of the independent oil men, in their plucky and continuous fight against the opposing giant combination, the Hon. James W. Lee, was also a Venango County man, once a law partner of Mr. Dodd in Franklin, and later one of the prominent lawyers and business men of Pittsburgh.

In 1905, Mr. Dodd was succeeded as general counsel of the Standard Oil Company by Hon. Mortimer F. Elliott, who was born in Tioga County. In 1878 the "boom" had begun in the Bradford oil field in McKean County, second from Tioga on the west. There were many new legal problems to solve and Mr. Elliott was drawn into the work. Once in the work of oil practice, he soon had retainers from many prominent interests and appeared in some of the most important suits tried in the Pennsylvania courts. He was chosen counsel for the Union Oil Company, of Pennsylvania, upon the death of Hon. John Hall, who had long occupied the position, and remained with that corporation until it was sold to the South Penn Oil Company, and he was retained by the latter. In 1892 he removed his headquarters from Wellsboro to Oil City, to devote his whole time to the legal business of the Standard Oil Company. During the six years following he was conspicuous in the oil and gas litigation of Pennsylvania, West Virginia, Ohio, and Indiana. In 1898 he was summoned to New York, where he remained, his field of action including all of the oil producing sections of the United States. In 1882 Mr. Elliott was nominated by the Democratic State Convention of Pennsylvania for Congressman-at-Large, was elected and served his term

at Washington, but in 1884 he refused a renomination. He was a member of the Pennsylvania Constitutional Convention that drafted the Constitution of 1874. He was one of the youngest participants in the deliberations of that body, but proved himself well grounded in the fundamental principles of law and took high rank in the discussions. This experience was of value in his later practice, in establishing the relations of the petroleum and natural gas industries to the Constitution. He was ever a student and ranked high among the authorities upon Constitutional and corporate law.

Martin Carey was reared in the oil fields of Pennsylvania, trained for the bar under the guidance of lawyers who first smoothed out entanglements in which the pioneers of petroleum production found themselves involved and established precedents which became recognized in law. Although a younger man by a generation than S. C. T. Dodd and Mortimer F. Elliott, Mr. Carey was often associated with them professionally, many years before he assumed the position of attorney of the Standard Oil Company of New York. Early in his career Mr. Carey closed his offices in Franklin and Oil City and removed to Buffalo, where he engaged in general practice. In 1893 he associated himself in a law firm which had a most distinguished history. In 1872 the firm was Bass and Bissell, composed by Lyman K. Bass and Wilson S. Bissell, who, twenty-one years later, became Postmaster-General in the second Cleveland administration. In 1874 Grover Cleveland joined the firm, which became Bass, Cleveland and Bissell. From 1876 to 1881 it was Cleveland and Bissell. Mr. Cleveland was elected mayor of Buffalo, Governor of New York State and President of the United States, and on his retirement did not return to Buffalo. His activity as a member of the bar of that city ceased, therefore, in 1881, when Bissell and Sicard succeeded Cleveland and Bissell. In 1893, as stated, Mr. Carey joined the legal alliance, which became Bissell, Sicard and Carey. Four years later the firm of Bissell, Carey and Cooke succeeded. Mr. Bissell died in 1903.

In 1906 Martin Carey removed from Buffalo to New York City, to become attorney for the Standard Oil Company of New York. There were many other brilliant advocates and safe counselors in the United States, but in this instance the position sought the man. Mr. Carey had a brilliant career at the bar of Venango County, before he removed to Buffalo, trying many important cases there and in the higher courts of his native State.

As a young man Mr. Carey and Peter M. Speer were together as law students in the office of Isaac Ash, of Oil City, and upon his retirement, Mr. Carey visited Mr. Speer in Oil City and persuaded him to accept the position of attorney of the Standard Oil Company of New York, and thus another Venango County son, who had achieved distinction in his profession, joined the group of able and distinguished attorneys associated with the Standard Oil Company.

Henry H. Rogers, later a director and officer of the Standard Oil Company of New Jersey, was a native of Fairhaven, Massachusetts. Born in 1840, he died in New York in 1909. After graduating from high school, he started to learn the railroad business, but following the discovery of petroleum, he determined to go into that business. He traveled to Union City, Pennsylvania, by train and went by stage-coach from there to Titusville, arriving in the evening of October 4, 1861.

Joining Charles P. Ellis, also of Fairhaven, he soon established a small refinery at McClintock, on Oil Creek, between Oil City and Rouseville. He remained there for six years, then going to the Pennsylvania Salt Works at Natrona, near Pittsburgh, which concern had, in addition to its chemical plant, one of the largest oil refineries in the country. In 1868 Mr. Rogers went to New York and associated himself with Charles Pratt, a leading oil refiner there. When, in 1874, the leading refineries of Cleveland, Pittsburgh, Philadelphia, the oil region and New York were allied under the name of the Standard Oil Company, the famous Pratt works were included. When the Standard Oil Trust was formed, on account of his large practical experience, Mr. Rogers was made chairman of its manufacturing committee. In a short time he became one of the trustees and upon the organization of the Standard Oil Company of New Jersey he became first vice-president. He was president of the pipe line system to which he gave particular attention. About 1895 he became chairman of the executive committee, relieving John D. Rockefeller of the active direction of the big company, and he continued in this position until his death.

Aside from the petroleum business, Mr. Rogers was widely connected in financial and industrial affairs. He engineered the consolidation of the copper companies into the Amalgamated Copper Company, saving the next older industry than petroleum from serious embarrassment, if not ruin, through gross over-production. He was connected with many financial institutions and was on the boards of several of the leading railroads. His greatest single achievement was

the construction of the Virginian Railroad, without an issue of bonds, which work was completed only a short time before his death.

Mr. Rogers was a most generous giver, as was learned after his death, but during life he was very averse to having his benefactions known. To Fairhaven, the place of his birth and the location of his summer home, he gave a free library, a Masonic Temple, a high school building, a public park, a system of paved streets and many other things. He provided for the erection of a memorial church in memory of his mother. At Oil City he assisted greatly in establishing the general hospital and Grandview Institution, a sanatorium for the treatment of tuberculosis, and built the training school for nurses, in connection with the Oil City Hospital.

John D. Archbold, who became president of the Standard Oil Company of New Jersey, was born in 1848 at Leesburg, Ohio. His father, Israel Archbold, was a native of Virginia, the descendant of an ancient Protestant Irish family, who settled in this country in 1786 and who had their origin more than a century before in the large immigration of Scottish and English settlers, who, in the reign of James the First, introduced Presbyterianism in the Irish province of Ulster.

John D. Archbold was given the best education obtainable in the primitive schools of that out of the way region, and at the age of thirteen years became a clerk in the country store located in the village of Salem, Columbiana County, Ohio. There he remained for a little more than two years. He evidently devoted his leisure hours to study, which contributed to his outstanding later success.

He went to Titusville at the age of about twenty years and entered the employ of William H. Abbott, oil refiner, and later became a partner in the firm of William H. Abbott & Company. Mr. Archbold, during his presence in the oil region, gained experience in practically every branch of the petroleum business. He became a large owner of the stock of the Acme Oil Company. Of this company he was made president in 1875. In the fall of 1875 Mr. Archbold became identified with the Standard interests and very soon became a director of the Standard Oil Company. His practical knowledge of the industry, his sound judgment and outstanding ability naturally led him to leadership.

Joseph Seep, who for many years headed the Standard Oil Company's crude oil purchasing agency, learned and followed the cigar-making trade as a boy and a young man and then was a clerk in the employ of a grain and hemp dealer. He went to Titusville in 1869

and with his old employer, Jabez A. Bostwick, went into the business of buying and selling crude petroleum. The Seep Purchasing Agency offices were in Oil City, but Mr. Seep retained his residence in Titusville, traveling between the two cities daily.

John J. Carter, founder and first president of the Carter Oil Company, learned and practiced the tailoring trade before he went into the oil business as a wildcatter around Pithole and Petroleum Center in the late sixties.

T. N. Barnsdall, founder of the Barnsdall Oil Company, drilled his first well near Titusville, at the age of sixteen years. His father, William Barnsdall, is said to have completed the first well after the Drake discovery well, in 1860.

J. C. Donnell, many years president of the Ohio Oil Company, was initiated into the oil business in 1872 in Crawford County, with a job hauling oil to a refinery in Titusville.

John W. Van Dyke, chairman of the board of the Atlantic Refining Company, was a rig builder and later a drilling contractor in Pennsylvania in the late sixties.

Calvin N. Payne, who became the head of all Standard Oil Company's gas interests, drilled his first well near Tarentum in 1864, at the age of sixteen. It was a 217-foot dry hole.

S. G. Bayne, founder of a firm which eventually became the National Supply Company, reached the oil country about 1870, locating at Titusville. He paid \$300 for the old Sugar House well, near by the Drake well, and got into the oil business. His first employment was as an apprentice to a grain importing firm in Belfast, Ireland, about 1864.

Richard Jennings, father of Edward H., Richard M., and John G. Jennings, later prominent in oil, left the mining business at the age of about forty-two in Queenstown, Pennsylvania, purchasing fractional interests in oil ventures. He got nothing out of it but experience, but he met with success in the Parker district in 1869, and became one of the really big men in oil production.

Edward H. Jennings, as soon as he left school, joined his father and was soon placed in charge of the latter's oil properties. Upon his father's death the three sons, known among their intimates as Ed, Dick, and John, organized the firm of E. H. Jennings & Brothers, oil producers.

Joseph H. Evans, president of the Devonian Oil Company, hauled oil in barrels from Shamburg to Pithole in 1867, which was his first start in oil.

Jacob Jay Vandergrift started as a cabin boy on the river steamboat "Bridgewater," at Pittsburgh, about 1843. When oil was discovered in the Drake well he entered the shipping business with Daniel Bushnell between the oil region and Pittsburgh.

P. M. (Mark) Shannon, co-discoverer of the Salt Creek Pool in Wyoming, and a prominent producer and wildcatter, started as a salesman for a Pittsburgh mercantile house in 1864. He entered the oil region in Parkers Landing, where he was associated with Richard Jennings in "The Guerrilla Well."

Lewis Emery, Jr., producer and refiner and one of the organizers of the Pure Oil Company and United States Pipe Line Company, started life as a school teacher in Hillsdale, Michigan. His first oil venture at Pioneer, Pennsylvania, in 1865, was successful.

David Kirk, president of the American Oil Development Company, and one of the founders of the Pure Oil Company, when a little boy worked in a cotton mill. Later he learned the carpentering trade. He drilled his first well in 1860 at Smith's Ferry, Pennsylvania. He started Kirk's Oil Yard in 1862 for the pumping, storing and shipping of petroleum, the first of its kind.

Lewis E. Mallory, of Treat & Mallory and Mallory & Sons, producers, and one of the organizers of the United Fuel Supply Company, started as a tool dresser for his father at the mouth of Bull Run on Oil Creek, in 1864. He drilled the first big well in the Lima field in Ohio.

John McKeown, who amassed a fortune of \$10,000,000 in oil production in the Pennsylvania fields, and was the largest individual oil producer in the eighties, started life working on the docks at Newry, Ireland. He went to Petroleum Center, Pennsylvania, in 1866, with what remained of \$25 he borrowed to make the trip from New York. He first engaged as a day laborer, then as a driller, contractor, and finally producer. He hated to owe anyone and throughout his business life he paid cash for everything that could be conveniently paid for when ordered or upon delivery.

Cyrus D. Angell, who established the "Belt Theory" or "45 degree trend," which was that the oil-producing sand rocks in the Venango field, had a northeast-southwest trend with a dip in the formation as it went southwestward, and who became a big operator and dealer in oil properties, started in the oil business in 1867, having sold out his mercantile interests and invested in prospective oil lands.

Jesse A. Heydrick gave to the oil country the first oil and gas lease that stood the test in every court in Pennsylvania, Ohio and Indiana. It was called the Heydrick No. 4.

Jesse R. Leonard, one of the organizers and first presidents of the Ohio Oil Company and veteran natural gas man, went to Pithole, Pennsylvania, at the age of seventeen. His first work was on a drilling well on Two Mile Run above Franklin in 1865. By 1871 he had gone into the oil-producing business.

David Bovaird, founder of a family of oil well toolmakers, and supply men, was originally a coal miner, but started in the oil business in Venango County in the sixties as a teaming contractor.

Patrick C. Boyle, oil country publisher, as a boy worked in coal mines. He entered the oil country in 1864, after serving a three-year enlistment in the Federal army, and started as a lease worker and later a pipe line worker in the Venango district.

Captain Joseph T. Jones, founder and later sole owner of the Bradford Oil Company, and the largest individual producer in the Bradford field at one time; later a railroad magnate and electric traction pioneer; arrived on Oil Creek in 1865 at the age of twenty-three, and promoted and drilled thirteen dry holes before he got a well which started him on the road to fortune.

J. L. Seyfang, one of the founders of Bovaird & Seyfang, learned the machinist's trade in Buffalo, but started in the oil country as a well worker in Petroleum Center in 1868.

R. J. Straight, extensive oil producer in the Bradford field from 1876 on, arrived on Oil Creek in the sixties and landed a job. Later he was in charge of the famous Noble well on the Farrel farm, which was the largest well of its time, producing altogether 442,000 barrels of oil. He was the father of H. R. Straight, of the Empire Oil & Refining Company.

John P. Zane, veteran oil producer and publicist, was bound out to a New Jersey harnessmaker when a small boy. He never attended school a day in his life, but became a successful business man and a noted public speaker and writer. He was one of the early arrivals in Titusville after the Drake discovery well.

Michael Geary, pioneer tank and boiler manufacturer, went to war in 1861 at the age of fifteen, and after the war started business life in Erie with the Erie City Iron Works, beginning at the bottom and learning the business thoroughly. In 1871 he arrived in the oil country to stay, locating first at Titusville as foreman for Gibbs, Sterrett & Company, at the age of twenty-seven years. Later he devel-

oped many interests, including the presidency of the Snow Pump Works in Buffalo and of the Oil City Boiler Works.

William Barnsdall, Sr., the world's second oil producer and first oil refiner, and father of three well-known sons, known to their friends as The., Bill, and Bide, otherwise T. N., William, Jr., and N. B. Barnsdall, learned the shoemaker trade in England and was following his trade in Titusville when the Drake well came in.

Henry M. Wilson, a cousin of Woodrow Wilson, First World War President of the United States, and long a resident of Franklin, who was a member of the firm of Bayne & Wilson, Bayne, Wilson & Pratt, and one of the founders of the National Supply Company, started in the oil country soon after the Civil War as an employee of the McCalmont Oil Company. Previous to the opening of the Bullion field he had an interest in and drilled seventeen dry holes. Then he sold for a small sum a one-acre lease and a partly drilled well to Thomas Phillips, because all around it were dry holes. The well came in for one thousand seven hundred barrels a day. His luck as an oil operator continued this way until he became disgusted and went into the supply business, where he was highly successful.

Charles W. Pratt, another of the founders of the National Supply Company, landed in Oil City in 1864, with a healthy body, a world of confidence and eighty cents. He got a job at the Humboldt refinery on Cherry Run, above Rouseville. At nineteen he formed the Shenango Valley Oil Company and drilled a test well on a six hundred-acre lease. It was dry and all went broke. He went to Pithole and labored in the field again, but at twenty he organized another company, Pratt, Lawrie & Company, and "struck oil."

C. M. Farrar and John Trefts, a couple of youngsters with little money, a lot of brains and much courage, started making engines in a little shop on Perry Street in Buffalo back in the sixties, and the oil country was a fine market for their product. They added good boilers to their line, hooked up with a real salesman and publicity man, S. G. Bayne, and their names became a household word in the oil regions of the world.

Henry M. Flagler, Standard Oil official and director, started to work at fourteen years of age as a clerk in a country store in Orleans County, New York. This was in 1844. He saved every cent possible until he had enough money to move to Saginaw, Michigan, and go into business. He conducted a salt works in that city and then moved to Cleveland, where he entered the oil refining business, finally joining the firm of Rockefeller, Andrews & Flagler.

Daniel O'Day, most noted of pipe line men, worked on a Cattaraugus County, New York, farm until he was sixteen. Then he went to Buffalo, New York, and obtained a job in the freight yards of a railroad. He was transferred to the warehouse and moved up into the transportation department. He arrived in the oil regions in 1865 and his natural talent as a transportation man gave him the opportunity of showing the oil industry how it could get its oil moved. When the pipe lines began to grow in number, Joseph Seep induced Mr. O'Day to join with Bostwick & Company, and his real career began.

Charles Lockhart, one of the founders of the Atlantic Refining Company, started as a clerk for James McCully in Pittsburgh, and later became a partner. His first deal in oil was in 1852, the purchase of three barrels of crude from a salt well in Westmoreland County, Pennsylvania. Later he left the firm of McCully & Company and went into the business of buying and selling oil. When the Drake well was drilled he became a partner in Phillips, Frew & Company, and started on his real oil career.

John Eaton, many years president of the Oil Well Supply Company, started in the oil well supply business in 1861, and has been called the father of the supply business. He was a clerk in the employ of Nason & Company, in New York, when he decided to go into oil well supplies. He first went it alone and then the firm of Eaton & Cole was formed, later becoming Eaton, Cole & Burnham, and finally the Oil Well Supply Company, Ltd., a combination of several supply firms.

Captain A. B. Funk, of Titusville, drilled the first flowing well, which was appropriately called the Fountain Well, on the McElhenny farm, a short distance north of what became Petroleum Center. It was drilled to 260 feet with a spring-pole outfit and then with steam power to the third sand, at a total depth of 460 feet, with the top of the sand at 400 feet. The well flowed 300 barrels per day initially.

B. F. Brundred went to Oil City in 1866 and was made chief clerk of the Empire Line in charge of all oil shipments. In 1877 he retired from transportation to go into the oil business in the Edenburg and the Bradford fields. He built the Union refinery in Oil City in 1879, his entrance into the refining business, in which later he became a prominent figure.

J. L. and J. C. McKinney, of whom the former died in 1937, at the age of ninety-five years, were Warren County boys, who came into the Titusville area in the early sixties with a very little capital and immediately went into the oil business as operators. J. L. (Lew) McKinney arrived first and his initial venture was a dry hole, but other early ventures were successful. Later Lew and Curt McKinney became known as large operators before the elder brother reached the age of thirty.

H. Jarecki & Company, of Erie (Petroleum Brass Works, eventually the Jarecki Manufacturing Company), drilled two gas wells in Erie County, the first one finding gas at one thousand two hundred feet in 1854.

W. A. Springer, who with his partner, Dr. Kennedy, opened a large field in the Osage Nation in Oklahoma and sold out for \$12,000,000 to the Osage Hominy Oil Company and the Sinclair Gulf Oil Company in 1916, started his oil career as a pumper in 1874 in Triumph, Pennsylvania. He became a drilling contractor in the Eastern and later in the Mid-Continent field.

W. J. Young, of Vandergrift, Young & Company, prominent producers in the second fifteen-year period of the oil business, really dates back to the early days of oil, having been in charge of Hanna Brothers' oil shipping business in Oil City in 1862. He later organized and was a member of a firm of oil shippers, Young & Company. The producing firm of Vandergrift, Young & Company sold out its properties to the Forest Oil Company, of which Mr. Young was one of the incorporators and chairman.

J. M. Guffey, of Guffey & Galey, and the J. M. Guffey Petroleum Company, out of which grew the Gulf Oil Corporation, entered the oil country in the seventies. He located at St. Petersburg and was made general agent for Gibbs & Sterrett Manufacturing Company, an oil field supply firm, the largest of its kind in the oil country at that time. Soon afterward he began operating for oil and in the second period of the industry gained a national reputation as a successful wildcatter. Guffey & Galey were among the pioneer operators in the Mid-Continent field.

William L. Mellon, chairman of the board of the Gulf Oil Corporation, made his first oil venture in 1888 near Pittsburgh, and later in the Turkeyfoot and Hookstown Pools. His first job after leaving school was as shipping clerk in the Mellon lumber yards in Pittsburgh about 1884.

Glenn T. Braden, one of the best known oil and gas men of the second and later periods of the oil industry, was first employed on

the old Union Pipe Line near Millerstown, Butler County. He was district foreman for the company in the big days of the Cherry Grove excitement in 1882. He rose to be general manager of the South Penn Oil Company and later was a leading gas man in the Mid-Continent field with the Oklahoma Natural Gas Company.

William Muir, who built and owned the Muir Oil Works in Warren in 1889 and later the Glade Oil Works, both of which were afterwards merged into the Crew-Levick Company, learned the marble cutting trade in Carbondale, Pennsylvania, then learned the carpenter trade and became a building contractor. He built the Hendrick refinery at Carbondale, after which he moved to the oil country, where his real oil career began at Warren.

Thomas Chestnut, president of the Chestnut & Smith Corporation for many years, and one of the world's largest manufacturers of casinghead gasoline, started as a pumper in the Bradford field in the late seventies.

Edward O. Emerson, who with J. N. Pew, drilled the then largest gas well in the world in West Virginia in 1881, the product of which was the first commercial gas to be shipped through pipe lines to Pittsburgh, was in the mercantile business in Wisconsin before going to Titusville in 1865. He went into the oil business at once, but his name became best known in the second period of the oil industry. He took an active part in the Ohio and Indiana development.

James H. Snow, noted pipe line builder and general superintendent of the Standard Oil Company's trunk line system, made his reputation in the second period, but he started to work on Abbott & Harley's pipe line in 1865. He was in charge of the construction of the first pipe line to the eastern seaboard, from Olean, New York, to Saddle River, New Jersey, in 1880-81.

George V. Forman, one of the largest producers in the Bradford field and whose Eastern Oil Company made oil history in later fields, was one of the big figures in the second and still later periods of oil. His son, George, succeeded him in the Mid-Continent field as head of the Southwestern Oil Company. One of his partners, David Gunsberg, was one of the well beloved characters of both Eastern and Western oildom.

The Spellacy brothers, Martin, Mike, Tim, Peter, and Simon, whose names are known in many American and foreign fields, started their careers in the second period of the oil business, 1874-89. When Martin was drilling at St. Joe in 1876, Mike was his tool dresser. Later they were well known and prosperous producers in the Ohio and other fields.

J. C. McDowell, prominent oil, gas and transportation man in the second and later periods, began his oil career in the engineering department of the United Pipe Line. He was in charge of the construction of gas lines from the Wilcox gas field to Bradford and Olean. In later years he was prominently connected with gas, oil and pipe line companies.

Loren J. Drake, vice-president of the Standard Oil Company of Indiana at the time of his death in 1918, started in the oil fields of Venango County as conductor on the Oil Creek Railroad. He made a study of oil transportation and marketing. He joined the Standard Oil Company in the late seventies or early eighties and was sent to Keokuk, Iowa, in charge of oil stations in that State. In 1902 he became vice-president of the Standard Oil Company of Indiana and later president of the Standard Oil Company of Kentucky.

Martin B. Daly, president of the East Ohio Gas Company, noted natural gas man, started life as a lease worker at Dallas City in the Bradford field, in 1878, at the age of eighteen. In three years he had risen to be assistant superintendent of the Warren County Gas Fuel & Heating Company of Warren.

Frank Haskell, for years president and the largest individual stockholder in the Tidal Oil Company, started in the oil fields around Pleasantville, Venango County, as a lease worker on his father's wells. He joined the Tide Water organization in 1908. Mr. Haskell's most notable work was in the Mid-Continent field.

Frederick H. Hillman, who rose to be vice-president of the Standard Oil Company of California, was given a three weeks' job when a youngster as a telegraph operator in the Bradford offices of the National Transit Company during the vacation period. As Mr. Hillman expressed it to a friend many years later: "My boss, Billy Splane, forgot to tell me when the three weeks were up." Mr. Hillman remained with the Standard until his death about fifty years later.

Thomas J. Donoghue, vice-president of the Texas Company, began as a clerk and telegraph operator in the offices of Joseph Seep when in his teens in the late eighties. He was transferred to Corsicana, Texas, as an oil buyer, where his real career began with the infant Texas Company. Mr. Donoghue has been quoted as saying that he could remember when he carried the account books of the Texas Company to his home to work on them nights.

James E. O'Neil, for years president of the Prairie Oil & Gas Company, began his interesting career in the late eighties as a roust-

about in the Titusville district. He was district foreman for the Ohio Oil Company at Prairie Depot, Ohio; a few years later. His upward climb was rapid. He came to the Prairie at a stormy time, with the oil business harassed by politicians, and soon smoothed the troubled waters and became a dominant oil personality in the Mid-Continent field.

T. B. Gregory, who rose to be president of the Manufacturers Light & Heat Company, got his start in the gas fields at Foxburg, Pennsylvania, in 1884.

John O'Brien, at the head of the Prairie Oil & Gas Company in Oklahoma and Kansas, preceding James E. O'Neil, was a telegraph operator in the Bradford offices of the National Transit Company in the eighties.

H. C. Ziegler, who started life driving a team on the towpaths of the old Erie and Pittsburgh Canal, and who in later life became a successful oil producer in the Venango County and other Pennsylvania fields, was one of the pioneer pipe line men and was the promoter of the Cleveland Pipe Line Company, which was designed to convey oil from the Butler County fields to Cleveland. S. D. Karns, wealthy oil man, took a controlling interest in it and made Ziegler assistant superintendent and changed the name to Karns Pipe Line Company. It was later merged with the United Pipe Line Company. Later Mr. Ziegler went into the natural gas business in Muncie, Indiana. The National Steel Casting Plant was another of Mr. Ziegler's successful ventures. He settled in Montpelier, Indiana.

Leander Milton, who is credited with having been the first oil operator to use a gas engine with which to pump wells operated quite extensively in the Venango field and to a less extent in the Clarion fields. He started in the oil business in 1872 by drilling a well on his father's farm in Cranberry Township, Venango County. Twenty-eight years later the well was producing as much oil as in the first year.

William G. Skelly, president of the Skelly Oil Company, started in 1894 as a clerk for the Oil Well Supply Company at Oil City. He later did hard manual labor in a Cleveland lumber-yard. When he came to Oklahoma from the Illinois field, about thirty years ago, he is quoted as having said that he was out to make a million within the year, and he came close to it in the southern Oklahoma field.

Christy Payne, treasurer of the Standard Oil Company (New Jersey), began his career as a bookkeeper for the National Transit Company in Oil City.

Edwin B. Reeser, president of the Barnsdall Oil Corporation, after a short period as a railroad telegraph operator, took a job as office boy for the United Natural Gas Company in Oil City, in 1891. A few years later T. N. Barnsdall, ever on the lookout for smart young men, induced Mr. Reeser to join his organization and in the course of time he rose to the top.

Norton Homan Weber, vice-president of the Pure Oil Company, when a boy in Titusville, was so anxious to go to work that when the agent of the W. N. Y. & P. Railroad would not give him a salaried job, he offered to start for nothing, and he was put to work on that basis, but the agent soon placed him on the payroll, and in three years he was chief clerk and cashier. Mr. Weber joined the Pure Oil Company in 1889 as a bookkeeper in the Oil City offices.

Addison H. Gibson, of Gibson & Zahnizer, international oil producers, was an Armstrong County, Pennsylvania, producer, who began his career with Pew & Emerson, oil and gas operators, in Pittsburgh. He started for himself at an early age and was successful. In 1911 the firm of Gibson, Zahnizer & Vincent entered the Mexican fields. In 1916 its first well in the Tepetate fields in Vera Cruz started at fifty thousand barrels per day. Mr. Gibson amassed a fortune, which following his death, by the provisions of his will, was used to create the Addison H. Gibson Foundation at Pittsburgh, of which Earl F. Reed and the Commonwealth Trust Company of Pittsburgh are trustees. The funds of the foundation are used for humanitarian purposes, and assistance to worthy young men, especially sons of men who have been identified with the petroleum industry, in acquiring their education.

George H. Jones, who at his death was chairman of the board of the Standard Oil Company (New Jersey), learned stenography and typewriting as a boy and went to work in the Oil City offices of the National Transit Company, as secretary to W. W. Splane.

One of the interesting figures of the northern oil fields in the seventies and early eighties was Julius F. Ross, who built the Bradford Oil Exchange and was in charge of the construction of the narrow gauge railroads that traversed every part of the Bradford and Alleghany fields. At one time one could travel from Wellsville, New York, to Foxburg, Pennsylvania, on railroads with a three-foot gauge. Later Mr. Ross went with the Buckeye Pipe Line Company.

Forest Dorn, president of Forest Oil Corporation, one of the largest operating companies in the Pennsylvania grade fields, started his business career at seventeen years of age by getting an option on

a small parcel of standing timber, also on a portable sawmill, and finding a buyer for the finished lumber, and then without batting an eyelid confronting Bradford's biggest banker and coolly asking a loan of enough to swing the deal. He got the money. Before he had reached legal age young Dorn had swung deals big enough to stagger the average business man, and they were all successful.

Thomas A. O'Donnell, who rose to be chairman of the board of the California Petroleum Corporation, and first president of the American Petroleum Institute, was a newsboy in Bradford in 1878, and as soon as he was big enough he got a field job with a Bradford oil company. His rise to the top was steady.

Thomas W. Phillips, who with his three brothers, I. N., J. T., and C. M. Phillips, organized the Phillips Brothers in 1863, a firm out of which grew an organization that is still prominent in Pennsylvania oil business, properly belongs to the first period, as he started in the business in 1861. The Phillips Brothers were the first to go out and lease land in large blocks for exploration purposes and they amazed their fellow-operators, who seemed content in many cases to lease tracts big enough to accommodate the derrick and drilling equipment for one well.

T. B. Slick, at times the largest individual oil producer in the United States, drove teams and worked around leases when a youth, and was a lease buyer for C. B. Shaffer when the Cushing field opened in 1912. He was a native of Clarion, Pennsylvania.

Ralph B. Pringle, vice-president of the Tide Water Oil Company, was born on his father's oil lease in the Parker's Landing field in Pennsylvania, and helped work on wells when a lad in his teens. His first employment with another producer was with the T. W. Phillips Gas & Oil Company, Butler, Pennsylvania.

Axtell J. Byles, president of the American Petroleum Institute and former president of the Tide Water Oil Company, was born in Titusville and entered the oil business as an attorney.

George W. Crawford, who became chairman of the board of the Columbia Gas & Electric Corporation, was born in and to the oil and gas business. At an early age he roustabouted on his father's leases. While yet a young man he joined E. M. Treat. They began building companies which have developed into a utility empire.

Fred Crawford also worked on leases as a boy near Emlenton, Venango County. He cast his fortunes with his brother George, and was an officer and director in the Columbia Gas & Electric Corporation at the time of his death.

Harry J. Crawford, producer, refiner and banker was another who got his first experience at hard work on Emlenton leases. He is a director in the Columbia Gas & Electric Corporation.

Peter H. Curry, president of the South Penn Oil Company, began with the National Transit Company in 1890 at Oil City. He joined the South Penn Oil Company and became vice-president in charge of development work and repressuring operations in the Bradford field. He succeeded Lemuel Watson Young as president.

In 1897 Sam Messer, president of Quaker State Oil Refining Company, and vice-president of Quaker State Refining Corporation, and James H. Berry Sons' Company entered the industry as bookkeeper at the Emlenton Refining Company plant, becoming treasurer of the company nine years later.

J. C. Trees, of Benedum & Trees, was a tool dresser in Indiana County, and later made oil connections in Pittsburgh while attending Western University of Pennsylvania, which aided in his success.

M. L. Benedum, of the Transcontinental and other companies, started in the oil business in the lease department of the South Penn Oil Company.

William H. Hasson, of Oil City, nine days after the Drake well came in, started in the oil business, but his first success did not come until 1863, when he drilled the Maggie well on Shaffer Run hill in Venango County. He organized the First National Bank of Oil City, one of the oldest banks in the eastern oil country.

In 1878 S. Y. Ramage entered the industry with his Mutual Oil Company refinery at Reno, Venango County, which he disposed of in 1895 to devote his energies to the production branch, and to acquirement of interests in utilities, beginning with Manufacturers Light & Heat Company, and continuing to a directorship in Columbia Gas & Electric Corporation.

In 1904 W. J. Brundred, large producer in the middle Pennsylvania district and in Kansas, began developing his own properties in Cornplanter Township, Venango County, and extending his activities to the Nowata, Oklahoma, pool two years later. In 1914 he was authorized to issue licenses on air repressuring for secondary recovery.

George H. Taber, Jr., vice-president of the Sinclair Refining Company, really was born in the refining business. His father had charge of the Atlantic refinery at Franklin, and George, Jr., was born "in the refinery yard." He went with the Sinclair interests in 1917.

Colonel E. V. D. Selden, a highly respected citizen of Oil City, who is still active there in business and civic affairs, in partnership

with Hon. James A. Fawcett, established the Crystal Oil Works in Oil City in 1897, which plant is still in successful operation. Prior to the date mentioned he was in the petroleum brokerage business, having become a member of the Oil City Oil Exchange in 1878, serving as president of that organization for a number of years.

Theodore N. Barnsdall, a native of Titusville, began his career as an oil producer at that city. Next he went into the Bradford field, where he was very successful, while his later operations extended into the various fields of the country. He was a leading operator in Oklahoma and was said to have been the largest single holder of territory in the Osage Reservation. He was president of the Union Natural Gas Company; president of the Barnsdall Oil Company; president of the Pittsburgh Oil & Gas Company; president of the Wildwood Oil Company; president of the Southern Oil Company; chairman of the board of directors of the Kansas Natural Gas Company.

William Walter Tarbell was born in Erie County just four months before his parents removed to Rouseville, then the thriving metropolis of the lower Oil Creek Valley. His parents later removed to Titusville, where he attended school and graduated from the Titusville High School in 1876. In 1881 he graduated from Allegheny College, Meadville. He then read law and later spent four years pioneering in the West. Returning to the oil industry in 1887, Mr. Tarbell helped organize the Valley Oil Line, one of the first independent pipe lines to be constructed after the period of general pipe line consolidation of the preceding decade. This line transported oil from the Grand Valley field, in Warren County, to Titusville. About that time he became actively connected with the Petroleum Producers' Protective Association and was associated with the interests that grew out of that organization; with the Producers & Refiners Oil Company, Limited; with the United States Pipe Line Company, the first to transport refined oil through pipes, and afterwards with the Pure Oil Company, of which he was made treasurer in 1902.

James Isaac Buchanan, who was a factor in the development of the petroleum and natural gas industries, first became identified with them in 1877. He at that time became private secretary and business manager for Captain Jacob J. Vandergrift, an extensive oil operator at Oil City, who has already been mentioned, and who was the founder of the United Pipe Lines, the Imperial Refining Company and the town of Vandergrift. Prior to his association with Captain Vandergrift, Mr. Buchanan had been a clerk in

the Oil City Trust Company. At the death of Captain Vandergrift, Mr. Buchanan became, under the provisions of the will, one of the trustees of the Vandergrift estate. He was president of the Pittsburgh Terminal & Transfer Company, president of the Pittsburgh Trust Company, director of the Keystone National Bank of Pittsburgh, The Natural Gas Company of West Virginia, the Bush Oil Company, The Washington Oil Company, the Taylors-town Natural Gas Company, and the Manufacturers Light & Heat Company. The esteem in which Mr. Buchanan was held by Captain Vandergrift, after twenty-two years of close association, is reflected in Article XIV of his will, as follows:

"I also enjoin upon them (his children) that they bestow upon James I. Buchanan the same confidence which I have always in my life reposed in him; as he has always been true and faithful to my interests, I feel assured he will be true and faithful to the interests of my children."

John B. Smithman had a spectacular career and made a number of contributions of public improvements in Venango County. He was born on a farm in Clarion County in 1844 and attended the country district schools three months each year. In 1860 he entered the Shippenville High School, where one professor personally taught all the students in attendance; was selected by Professor Haight to teach the high school one week in February, 1861, during the professor's absence on other business; taught district school in 1862 near Knox; again attended high school; taught district school in 1863 at Hill City, Venango County; taught school in the early part of 1864 in what was called the "Red School House," located a half mile south of what later became South Oil City.

In the winter of 1864 Mr. Smithman drifted into the oil business as a buyer of barreled oil on Oil Creek, selling it in Oil City on the west side of Oil Creek, where then was a great busy oil mart, and the principal business part of Oil City. At this time he was also engaged in the business of looking up oil lands or leases having thereon ravines, streams, large or small, and more particularly streams with branch streams running into them; and making maps thereof, with the streams conspicuously marked, and turning the lands over, on a short time option sale, to promoters, who in turn would join other promoters in New York, Philadelphia, Boston, Baltimore and other cities, and use these options and maps as the basis for forming stock companies with high sounding names, such as "Ocean Petroleum Com-

pany," "Pouring Rock Oil Company," "Oil Basin Petroleum Company," with large capitalization, and selling stock therein, at fabulous prices; all on the theory, then prevailing in the oil country, and emphasized to the prospective buyers of lands, leases or stock certificates, that the oil was found in vertical and horizontal crevices in the rock formations, below the surface, and that the ravines, streams, and coves on the lands offered were sure indications of crevices, deep below the surface, where oil would surely be found. A stream or ravine with a branch running into it made it doubly certain that a crevice filled with oil existed below, at or near the place where they joined.

In 1865 the crevice theory of oil deposits gave way to the theory that oil existed in a horizontal porous rock, and that by drilling down to the level of the oil rock, oil could be found on elevated lands as well as along streams and valleys.

In 1867 Mr. Smithman drilled an oil well on the bank of Oil Creek above what is now Duncomb Street in Oil City, in a manner that was a radical departure from the way oil wells were then drilled, and a method which came into general use.

Later he operated for oil in Butler, Clarion, McKean, Warren, Washington, Allegheny and Venango counties.

He was chairman of the committee which in 1877 got out a charter of incorporation for the Oil City Oil Exchange and selected and purchased the site for the fine building erected on the west side of Seneca Street, which became the home of what had always been the leading oil exchange, and in which the trading amounted to many millions of barrels per day, making the base market price for oil throughout the world.

Various other oil exchanges were located at Parker, Titusville, Bradford, Pittsburgh, Philadelphia, New York City and elsewhere. Mr. Smithman was chairman of the committee that formulated the rules and regulations for the government of the extensive dealings in these oil exchanges, which were all more or less affiliated and all governed by the same trade regulations, which all the members agreed in writing to support and maintain.

One of these rules provided for the settlement by an arbitration committee of all disputes arising among members; another provided for confining all trading in oil among members to the hours between nine o'clock A. M. and three P. M., and, to this end, Mr. Smithman arranged with the Western Union Telegraph Company, which was connected with all the oil exchanges, to ring in them simultaneously,

a gong at nine A. M. and three P. M., to mark the opening and closing time for trading; this being the first time in history when instant time was sent to widely separated points by electricity.

In 1882 the stocks of oil in one pipe line alone, the National Transit Company, operating in western Pennsylvania and New York, amounted to over thirty-three million barrels, most of which was covered by these oil certificates issued by the various pipe line companies engaged in the business of transporting crude oil from oil wells to refineries, railroad shipping points, and huge iron storage tanks, and which were bought and sold, for prospective profit, in the various oil exchanges. These certificates were negotiable, and were issued for one thousand barrels of oil each, deliverable upon demand at any point reached by the company issuing them, and were subject to a pipeage charge of twenty cents per barrel, payable when the oil was called for, and also to a charge for storage and shrinkage payable in advance every fifteen days.

The extensive trading in the Oil City Oil Exchange by the numerous brokers and traders, by open bids around a "bull ring," caused much confusion when the deliveries of these oil certificates and bank checks in payment therefor had to be made, which by a rule were due and deliverable before three o'clock P. M. on the day after the sales were made. The brokers and dealers depended upon getting in, at this time daily, the oil purchased by them the previous day, in order to make deliveries, at this time daily, of their sales of the previous day, amounting to hundreds of transactions each day by each active trader. This resulted in a big rush just before the close of the delivery hour, often ending in failure to make all the deliveries within the time set to make them, and frequently causing a financial loss to those directly concerned; and various expedients were tried by a committee appointed by the exchange to remedy the evil, but none were successful. It was then that Mr. Smithman, although not an active trader, nor a member of this committee, got up a plan by which each trader was enabled to effect daily, with ease, all his receipts and deliveries of both oil certificates and money. This was accomplished by each trader making, on a sheet of paper ruled for the purpose, a list of his purchases and of his sales, with the names of co-traders and prices and amounts thereof, and footings of both oil and money and balances due to or from the trader, and delivery to a clearing house or receiving therefrom only the balances shown, of both oil and money; the balances of all the traders balancing each other.

He demonstrated his plan by going through the actual operation of clearing at a meeting of the oil exchange called for this purpose,

which thereupon adopted it by nearly a unanimous vote, and it proved so simple that all the oil exchanges and later the stock exchanges throughout the United States adopted it, and it was also adopted by all stock exchanges and bourses throughout the world for delivery of different commodities and money at the same time. Since the successful operation of this plan many persons have appeared in different cities claiming to have invented it, one New Yorker even trying to copyright it; but these are all disposed of by the minutes of the meeting of the Oil City Exchange held October 10, 1882, where appears this record:

"Mr. J. B. Smithman presented and demonstrated his plan for making deliveries of oil certificates, consisting of sheets ruled for the purpose, one sheet to be filled out each day by each trader, showing his purchases in a column on one side and his sales in a column on the other, and the amount and prices thereof in separate columns; the names of the sellers and the purchasers in other columns; and showing at the foot the amounts of the balances of both oil and money due to or from the trader; checking up with each trader involved; and delivery of this sheet with bank check, and oil certificates, shown to be due from the trader, to a clearing house manager, whose duty it shall be to prove the balances and deliver them to whomsoever is entitled to them. The meeting adopted the plan."

In 1883 the question arose among the holders of these oil certificates whether the National Transit Company really held sufficient stocks of oil to cover or make good the oil certificates it had outstanding; and to allay suspicion, the pipe line company invited the oil exchanges to gauge its tanks and examine its books. Mr. Smithman, although an opponent of the alleged ruthless seizure of the oil trade by the Standard Oil Company interests, was on account of his reputation for fairness selected by the oil exchanges, and accepted by the pipe line company, to act as chairman of a committee to make the gauge and examine the books. All the oil stocks of this company, amounting to over thirty-six million barrels in iron and wooden tanks, scattered over a large area of country, were measured in one day, September 1, 1883, and the books of the company were later examined, showing an excess of over half a million barrels of oil on hand, which stimulated the price of oil, and further speculation in it. On May 14, 1884, the trading in the Oil City Exchange

amounted to over twenty-nine million barrels; on the next day to over twenty-seven million barrels; and the extensive dealings in these oil certificates made the basis for the market price of oil for the whole world, which finally was not to the liking of the Standard Oil Company.

So in 1893 the Standard Oil Company interests stopped buying these oil certificates, the issues of their own pipe line company, except at a prohibitory discount, which they had previously been buying at market prices to replenish their needs of crude oil; and announced that they would buy only what are now termed "credit balances," at a price made by themselves, and thus, in one stroke, was enacted the tragedy that killed the trading in oil in the oil exchanges; and, as a consequence, killed the oil exchanges themselves.

In 1890 Mr. Smithman incorporated the Oil City Street Railway Company, whose cars were to be run by electric motors. After considerable difficulty due to existing legislation prohibiting the building of any highway bridge within three thousand feet of any existing toll bridge, without its consent, and his inability to make arrangements for running street cars upon the then two existing toll bridges, he finally investigated all legislation and court decisions upon the subject of highway bridges, and by combining the effect of three separate decisions of the Supreme Court of the State, rendered at different times, he concluded that the amendment containing the three thousand feet limit was void.

In March, 1892, after three hearings, he convinced the Secretary of State of this fact and secured a charter to build the "Relief Bridge" over the Allegheny River at the foot of Central Avenue, between and within four hundred feet of the other two toll bridges.

He commenced the construction of the bridge piers and of the street railway in 1892, after the great flood and fire in Oil City of June fifth of that year, and after all his associate stockholders in both bridge and street railway had, on account of the gloomy future prospects, decided not to invest any money whatever in the enterprise. He then ran into difficulty with the Allegheny Valley Railroad, due to opposition to building the bridge at the required level over the tracks of the railroad, which he overcame in a very spectacular manner. The bridge, 830 feet long, was finished during the financial panic of 1893, when occurred a great shrinkage of values, and the first street car was run over it on Thanksgiving Day, November thirtieth, of that year. The price of oil during all of 1892 and most of the year 1893 was below sixty cents per barrel, on account of the large

production of the McDonald oil field in Allegheny County, and the new oil fields in West Virginia, so that much of the population of Oil City and the "upper country" migrated to these new oil fields, which together with the effects of the disastrous fire in 1892, created a feeling of uncertainty as to the future of Oil City. Therefore the building by Mr. Smithman, during these panicky times, of the new bridge, and the construction of the street railway, he furnishing all the money for both and giving employment to a large number of idle men, were appreciated by the majority of the people of Oil City and these public improvements engendered a feeling of confidence in the future and encouraged people to buy homes and locate there permanently. Property values in the city and especially on the south side of the river increased millions of dollars in a short time.

In 1894 and 1895 Mr. Smithman extended the street railway to Cottage Hill; to the East End; and to the West End; and finding that the street railway business would not pay in Oil City, he purchased 530 acres of forest lands in Cranberry Township, midway between Oil City and Franklin, and thereon founded what was known as "Smithman Park," and in July, 1896, extended his street railway to it, with a view of extending the railway later to Franklin. This park had an ideal location and mineral springs, and at once became a popular resort for all classes, attracting picnics from all the nearby towns and the surrounding country, which had previously gone to distant places, at large expense and tedious travel. The park thus became a valuable asset to Oil City, Franklin, and the surrounding country, as well as to the street railway company.

In August, 1900, Mr. Smithman sold the "Relief Bridge" to the county at half its cost, to be made a free bridge—the first free bridge over the river in Oil City.

In 1900 he secured an ordinance to build a street railway in the city of Franklin, and a permit from the War Department to erect a bridge over the Allegheny River to enter that city at Third Street, and commenced the erection of piers for this bridge and the extension of the street railway from the park to Franklin, and also commenced the construction, on his lands, of a dam one mile below the park for a lake. But before their completion he sold, January 14, 1901, his street railway, and the surface of sixty acres of the park lands, including the auditorium, restaurant and pavilion, to the Citizens Traction Company, which had secured an ordinance to build a rival street railway in Oil City, including the right to use the tracks of Mr. Smithman's road through the center of the city and the con-

struction of which was actively progressing—and he knew that two street railway systems could not operate profitably. The new company changed the name of Smithman Park to Monarch Park.

In 1901, after the opening of the Spindle Top gusher oil field, near Beaumont, Texas, Mr. Smithman was invited to come to Houston, Texas, to help form the King Oil Company, a three million dollar oil corporation, which had oil leases in the coastal counties of Texas, including the renowned King ranch of a million and a half acres in Nueces County. He examined the charter of the company, which was the same as others that were being granted in Texas, and he convinced the two lawyers on the board of the company and the Attorney-General of the State that these charters were invalid, because they authorized leasing and buying of oil lands; operating for oil; refining, selling and dealing therein; and also the laying and operating of pipe lines for transporting oil, and condemning lands for rights of way therefor; the latter, as he claimed, being a common carrier public service business, separate and distinct from the former, and therefore not germane as required by law. The charter was changed, and thereafter no more such charters were granted in Texas.

The promoters of the company, which included Pittsburgh (Pennsylvania) oil men, had taken the leases on the northeast and southwest belt line theory, prevailing in New York, Pennsylvania and West Virginia oil and gas fields. He convinced the board of the company and the Texas State Geologist that Texas does not belong to the domain of the Appalachian Mountain range, and that anticlines and domes in Texas would be dominated by the Rocky Mountain system and would run northwest. Mr. Smithman was thereupon elected president of the King Oil Company, although another man had been selected for the office. Three wells were, however, drilled by the company on the leases already taken, but they were barren of oil. The one well drilled on the King ranch and the well drilled in Jackson County proved the presence of artesian waters, which knowledge was of incalculable benefit to the coastal region. The enormous production of the Spindle Top fuel oil pool sent the price of this oil down to five cents per barrel, and the King Oil Company and many others quit the business.

In the spectacular days of Pithole there existed an organization heralded far and wide as "Pithole's Forty Thieves." A prominent oil operator associated with this organization attained high recognition, serving in the capacity of United States Congressman and Governor of Alaska.

Well superintendents, controlling the interests of outside companies, were important personages. Distant stockholders, unable to understand the difficulties and uncertainties attending developments, blamed the superintendents for the lack of dividends. No class of men in the country discharged their duties more faithfully, yet cranky investors in wildcat stocks termed them "slick rascals," "plunderers" and "robbers."

Some joker suggested that once a band of Arabian Knights—fellows who stole everything—associated as "The Forty Thieves" and that the libeled superintendents should organize a club. The idea met with a popular response and "Pithole's Forty Thieves" became at once a reality. Merchants, producers, capitalists and business men enrolled themselves as members. James Sheakley, of Mercer, was elected president. Social meetings were held regularly and guying greenhorns, who supposed stealing to be the object of the organization, was a favorite pastime. The practical pranks of the "Forty" were laughed at and relished in the whole region.

Nine-tenths of the members were young men, honorable in every relation of life, to whom the organization was a genuine joke. They enjoyed its notoriety and delighted to gull innocents who imagined they would purloin engines, derricks, drilling tools, sawmills and oil tanks. Ten years after the band disbanded its president served in Congress and was a leading debater on the Hayes-Tilden controversy. "Pap" Sheakley, as the boys affectionately called him, was admired for his integrity, kindness and hospitality. He operated in the Butler field and lived at Greenville. Following the deaths of his wife and daughters, he accepted from President Cleveland the Governorship of Alaska, and his administration was so satisfactory that President Harrison reappointed him.

A Historic Relic to be Preserved—A relic of the formative days of the oil industry, the first charter of the Oil City Oil Exchange, has been presented to the Drake Well Memorial Park Museum, where also several of the old minute books of the exchange are being preserved.

The charter was drawn up in 1877 and is in a fine state of preservation. It had been in the possession of the Oil City National Bank, whose beautiful modern building now stands on the site where formerly stood the exchange building, which in its day was also a fine structure.

In addition to the statements relative to chartering the organization, the document contains the names of the 160 charter members

of the exchange. Of the 160 signers only one man is yet living. He is Captain Daniel Fisher, who is now 101 years old.

In view of the interest which the many descendants of the 160 charter members hold in activities of their forebears, the words of the charter are herewith reproduced.

Text of Charter—"We, the subscribers, at least three of whom are citizens of the Commonwealth of Pennsylvania, with our associates herein named, do associate ourselves together for the purposes and in the manner herein stated, under and in pursuance of the Act of Assembly of the Commonwealth of Pennsylvania, approved the 29th day of April, A. D., 1874, entitled 'An Act to provide for the incorporation of certain corporations' and the supplements thereto; and, for the purpose of incorporation under the provisions of said Act of Assembly and its supplements, do set forth as follows the intended Charter of Incorporation:

"The name of the corporation shall be The Oil City Oil Exchange.

"The purposes of said association are: I. The purchase of suitable ground in the City of Oil City, Venango county, Penna., and the erection thereon of a hall, building or buildings, for the use, accommodation and convenience of the members thereof in the business of buying, selling, transferring and trading in petroleum oil and its products and business incident thereto. The yearly value or income from such retail estate not to exceed twenty thousand dollars.

"II. The encouragement and protection of trade and commerce in petroleum oil and its products, by the establishment and maintenance of by-laws, rules and regulations, not contrary to law, for the government of members of said association in the business of buying, selling, transferring and trading in petroleum oil and its products, the enforcement of contracts relative thereto and the settlement of disputes and adjustment of differences arising therein.

"The business of the corporation shall be transacted in the City of Oil City, Pennsylvania.

"The charter of the corporation is to be perpetual."

Thirteen of the men were named directors and the amount of capital stock was \$45,000, divided into nine hundred shares of the par value of \$50 each. On April 9, 1877, the charter was recorded at the courthouse in Franklin.

The names of the subscribers are as follows (all members subscribed to three shares): J. B. Smithman, H. L. Foster, Charles H. Duncan, John Mawhinney, E. C. Bradley, H. F. Whiting, S. R. Wheeler, George Heard, F. W. Mitchell, E. H. Colman, Isaac M. Towers, M. K. Bettis, Paul Goettel, Thomas King, A. J. Greenfield, John Wallace, George W. Thumm, C. F. Thumm, L. Thumm, Charles J. Fraser, W. K. Vandergrift, A. Kline, John Eaton, Sam Justus, John Parker, David Hannah, C. H. Shepard, John F. Zane, Thomas R. Cowell, Henry Fisher, R. R. Armor, George H. Hukill, John Barr, D. Bolard, Jr., John Connor, George H. Van Vleck, W. A. Byers, William Brough, H. Robbons, George Boulton, J. B. Jayne, Peter Schreiber, W. P. Halderman, J. T. Johnson, J. N. Bolard, A. J. Thompson, J. M. McElroy, F. H. Steel, F. N. Hays, H. McWalters, G. E. Foster, O. F. Schonblom, William Parker, James B. Berry, J. C. Buchanan, G. R. Kemp, D. H. Boulton, W. H. Kinte, Jacob Goettel, Harry Howe, G. S. Morgan, R. Colbert, C. W. Curtis, W. M. Leckey, Wesley Chambers, F. M. Bettis, W. H. Longwell, John C. Welch, William T. Scheide, George Cornwall, N. F. Hilton, C. Rondeboush, F. Densmore, James Mawhinney, Henry I. Beers, Paul Fisher, James A. Waugh, R. A. Rogers, R. T. Leech, James A. Austin, I. S. Gibson, M. Lowentritt, William A. Shreve, William Hasson, M. B. Taylor, E. A. Howard, W. N. Thompson, S. M. Bobbins, Hugh C. Graham, Thomas B. Porteous, James S. Lowe, Philip Goettel, Joseph Seep, James Adams, A. J. Stephenson, John J. Fisher, S. Hanna, A. T. Conner, O. H. Strong, C. Foley, H. S. Brocklehurst, W. S. McMullan, John S. Rich, C. J. Laughlin, Louis Roess, M. C. Goss, Frank Wright, G. G. Stage, John W. Davis, W. G. Young, J. T. Jones, Joseph Manning, George W. Darr, C. J. Walker, John H. Lee, J. J. Vandergrift, John R. Campbell, E. Hopkins, W. J. Young, G. W. Milford, Henry Lewis, B. H. Judd, Daniel O'Day, John Coast, C. A. Cooper, F. B. Foster, C. H. Richardson, M. M. Mount, D. S. Criswell, C. P. Stevenson, William Halderman, I. B. Jacobs, A. Fraser, C. W. McClintock, S. D. Parker, J. D. Reimbold, John H. Oberly, E. E. Chambers, W. W. White, M. W. Morgan, Charles Haines, C. A. Conners, Isaac Ash, L. Beaumont, C. W. Gilfillan, Charles M. Bly, W. E. Taylor, Thomas Hackett, F. B. McDonald, George L. Beaumont, W. M. Layman, C. E. Main, Charles Leedom, George D. Dale, George Porter, Alex Culbertson, H. N. Arnold, F. H. Tiernan, Frank Tack, D. W. Clarke, A. L. Wyman, Clark H. Smith, S. H. Lamberton, W. L. Lyon, F. C. Brown, H. M. Coate, A. A. Plumer.

CHAPTER X

Banks and Bankers

"The history of American business is written in terms of American banking."—WILLIAM J. FLYNN.

The word bank meant originally a bench or a table for changing money or other mediums of exchange. The term is now applied to institutions engaged in the receiving and lending of money, guaranteeing credit, safeguarding savings, buying and selling securities, collecting bills and drafts, issuing notes, and rendering many other services. Seldom does one bank engage in all forms of banking, for there are many types, each of which combines functions usually indicated by their titles.

Until the last decade or two there were few countries in the world where national finance had been more frequently and violently affected by political and economic events than the United States. This is partly due to the theoretical ideas of the early (and late) politicians; the complete revulsion against anything European after the break with the Mother Country in 1776, when anything that was foreign must, because of that fact, be held wrong; perhaps also to the inevitable inclination to tinker with everything so characteristic of the American people; the newness and rapid and tremendous expansion of our economic life; and the bigness of the scale on which a great country developed its resources.

Into the national aspects of banking this chapter cannot go except as the national history is a sublimation of the methods and experience of the local settlements. The Colonies made their individualistic experiments, mostly extremely crude, to handle their problems of finance. Abundant issue of paper money was one of the mistakes they made; every new country and most of the old countries made like mistakes. The period after the First World War furnished many examples of this, notably Germany. In the case of the latter it was a mistake since it was one of the causal reasons for the rise of Naz-

ism and Hitlerism. Some very important Americans made this mistake of buying up depreciated marks with the expectation of reaping fortunes when the German Government should assume responsibility for the vast quantity of printed paper and pay for it at a price approaching par.

While something further will be included in this chapter about certain changes in the financial history of the past hundred or so years, there is no need of going into the history of banking in northwestern Pennsylvania of more than a century, except as the effects of prior political and financial events affected this part of the Commonwealth. The economic life of the part of the State in which we are interested had not advanced very far in 1800. Until that year, its vast area, one-fifth of all of Pennsylvania, together with as much more, made up one immense county. Settlement had not progressed beyond the sparse and scattered. Farming was the basis of prosperity, although forest industries soon loomed large. Among themselves the pioneers used almost anything as a medium of exchange—grains, cattle, peltry, pot-ash, lumber. One reads of certain amounts of whiskey being the equivalent of so much flour or fur; and of an ambitious student in Clarion County who paid for his tuition with "an old cow." Specie was drained from the region by the purchase of things manufactured in the East or abroad. Paper money was of doubtful and constantly varying value, and its acceptance took on the aspect of speculation. We are writing of the period between the first settlements of this territory and the 1830s.

It may be well here to make an excursion into the general prior stages of finance and banking to clarify conditions in northwestern Pennsylvania. Suffice it to indicate that for various reasons the value of the paper currency issued during the American Revolution had collapsed. The Colonies tried to carry on the conflict with the Mother Country on borrowed funds or fiat money. It was not the only attempt our Nation has made to use this old method. In 1779 there were more than forty emissions, with the backing of the Colonies as a whole, of nearly a quarter of a billion dollars, and individual Colonies had put out more than \$200,000,000. Without going into the reasons why, it may be taken as practically true that there was no political machinery in force to redeem this immense quantity of paper. Less than three-quarters of a billion dollars may seem piffling in these days of a hundred billion and more, but it was almost as large for the population of the Colonies, then, as the present colossal paper, bonds and prospective debts of the Federal and State governments.

When the new Nation was organized the collapse and partial repudiation of these State and Colonial issues were inevitable; in numerous cases the depreciation was one thousand to one. Breck says that "The annihilation was so complete, that barber shops in jest papered their shops with bills, sailors and soldiers had suits of clothes made of their pay."

In 1781, the Bank of North America was chartered, and the banks of New York and Boston were incorporated in 1784, all three



Air View of Farrell Residential District

founded by the Congress, to furnish a stable circulation medium. Incidentally, there were State authorized banks active at that time. The Constitution expressly forbade their issuance of notes. On December 12, 1791, the Bank of the United States was founded at Philadelphia, with branches in several of the larger American cities. It never stood well in the eyes of politicians because it was suspected of being an instrument to keep the dominant party in power. Whatever its faults, the "First United States Bank" did control many fly-by-night State banks. The Embargo Acts preceding the War of

1812 weakened its structure, and in 1811 its charter ran out and was not renewed. The so-called State banks then came again into their own and flourished famously, usually at great cost to the common citizen. The system of State banks exceeded in wealth (on paper at least) that of the national government.

The War of 1812, with the attendant suspension of specie payments, and the disordered system of bank note circulation, demanded some such regulation as that exerted by the first United States Bank. In 1816, on April third, laws stabilized the situation, curbed the further issue of local notes, and brought about the failure of State banks and prevented the incorporation of new ones. The Federal institution, then set up at Philadelphia, was the Second Bank of the United States. It undertook and did splendid work, but instead of winning the gratitude of the people it aroused the enmity of politicians, including no less than President Andrew Jackson. This famous personage ordered government funds deposited with this bank to be distributed among certain hand-picked local banks, and the State bank came once more into its own and showered the country with "shin plasters." A few years after the Second Bank of the United States had been put out of business (1832), State banks had doubled their circulation of notes, and in 1837 these organizations (534), with deposits of only \$127,000,000, with aggregate capital of \$291,000,000, had issued notes to the amount of \$149,000,000 and had loans and discounts out to the tune of \$525,000,000. In the meanwhile, the total amount of coin minted by the United States since its founding was less than \$50,000,000, the most of which had been sent to foreign countries in payment of trade balances.

The inevitable result of this inflation and flimsy banking structure was a short period of expansion in all sorts of enterprises, great and small, especially in such newly settled regions as northwestern Pennsylvania. There never had been such wonderful prosperity (?); it shone out in all the glorious iridescence of a bubble. President Andrew Jackson gave the pin-prick that burst the bubble. In 1836 he issued an executive order that all payment for public land must be made in specie. It is said that in the following year there was not a bank in the United States that had not suspended specie payment at sometime in 1837. If the expression "hard times" was not born right then, it certainly took on new meaning, and all the State and governmental endeavors to ameliorate them failed more or less up to the Civil War. The foregoing has been written as a partial explanation of why there are so few surviving banks in northwestern Penn-

sylvania whose history goes farther back than Civil War times and the immediate following period.

To continue with the story of American banking in general. In 1864 a bureau was established in the Treasury Department, under the immediate jurisdiction of the comptroller of the currency, which was empowered to supervise a national banking system. This bureau imposed the following restrictions upon national banks: None could be capitalized at less than \$100,000 in cities of more than six thousand population, nor with less than \$50,000 in communities of lesser size; fifty per cent. of the capital had to be paid in and the balance paid in five equal monthly installments before a bank could begin operations; at least thirty per cent. of the paid-in capital had to be invested in Federal bonds deposited with the United States Treasury, which could issue bank notes equal to ninety per cent. of the bonds' par value; and the total amount of currency in circulation throughout the country was limited to \$300,000,000. The notes so issued were made redeemable in gold or silver on demand and were legal tender for all payments except duties on imports. Rural banks were required to maintain reserves equal to fifteen per cent. of their outstanding notes and deposits, of which three-fifths could be redeposited with enumerated city banks. These in turn were required to maintain reserves equal to twenty-five per cent. of outstanding notes and deposits, one-half of which might be redeposited with the national banks in New York City.

This system prevailed without any radical change until the passage of the Federal Reserve Act in 1913. This Act provided for the establishment of Federal Reserve Banks, in which compulsory membership for all national banks was effected by purchase of reserve bank stock by the latter in the amount of three per cent. of their capital and surplus.

Following a period of enormous stock speculation, industrial and credit expansion in 1928-29, a severe economic depression brought grave anxiety regarding the future of the American banking system. In 1930, 1,352 banks failed, and a high point was reached in 1933, when 2,741 banks closed their doors. In the four-year period 1930-1933 more than 4,000 banks failed, involving deposits totaling \$5,144,647,000. In March, 1933, all banks in the country were closed for ten days, after which those found to be in sound condition were reopened; about 4,500 banks, however, were placed in the hands of conservators to be operated on a basis of restricted payments.

An Act of Congress, March 10, 1933, suspended all payments in gold and brought about radical changes in the system of eligibility of commercial paper for rediscount. Another Act (June, 1933), set up a plan which, through an organization known as the Federal Deposit Insurance Corporation, guaranteed bank deposits up to \$5,000. In the same year the gold standard was abandoned; the gold clause in all contracts, government bonds, and gold notes was cancelled, and the public was called upon to turn all gold holdings over to the Treasury Department, hoarding being made a criminal offense. Further banking reform took the form of prohibiting the practice of investment banking, securities issue, etc., in connection with deposit banking. The payment of interest on demand deposits was forbidden, and regulation of interest rates on time deposits was placed in the hands of the Federal Reserve Board; joint service of bank directors on bank and financial corporation boards was prohibited; and the Reserve Board was authorized to fix the amount of credit which member banks could extend on collateral loans. Allied measures were adopted in the form of agencies to relieve home and farm owners' mortgages and in broadening of the Reconstruction Finance Corporation's powers, enabling that organization to perform financial services of an emergency nature. Apparently the "emergency" has never ended, and the Reconstruction Finance Corporation has grown great in size and powers. In 1933 it purchased preferred stock in more than three thousand banks, and named directors of many of them. The Reserve Banks financed the enormous appropriations of Congress for various forms of economic relief and "social projects." Some of the more critical say "The banks were rescued in 1933, but only to finance government schemes."

Fifty or a hundred years hence historians of economics will, from the high pinnacle of time and distance, write the story of American banking in the decade from 1933 to 1943 and beyond. They will outline the various changes made in policy and practice in banking, compare these with prior strange conditions, and explain how our country could enter World War II with a shortage of most everything except buried gold and silver and government paper. The figures named by these historians, when writing of 1942 and after, will be colossal, not to say astronomic. At the beginning of 1942 the monetary gold buried at Fort Knox, Kentucky, was approaching twenty-three billion dollars, rated at the United States valuation of thirty-five dollars an ounce, together with much more than two billion dollars' worth earmarked to other countries. There were also tons of silver at

West Point, New York, and elsewhere, valued at nearly four and a quarter billion dollars by the Treasury Department, at its own basis of \$1.29 per ounce, although silver was selling in the world market from thirty-five to forty-five cents per ounce. Money in circulation, June, 1941, was slightly above nine and a half billion dollars; a year later, June, 1942, it was above twelve billion dollars, certainly the largest per capita circulation in the present century, and perhaps the highest in our history, except for certain few "shin-plaster" times. Total bank deposits for the whole United States, on January 1, 1942, were in round figures, \$14,895,000,000—less than the prior year and much less than the year ending December 31, 1939. The assets of the Federal Reserve Banks were largely governmental in nature.

Wrote Robert Warren, in January, 1942:

"Three factors of especial significance deserve attention at this time. The banking system of today is entirely different from that of 1917. In 1917, its principal asset was the commercial loan; today its principal asset is the government bond. Second, in the world war, the government market was pegged eventually on a $4\frac{1}{4}$ per cent. basis. We have entered this war on a $2\frac{1}{2}$ per cent. basis for the longest term maturities. This differential is not so great as it looks, for in the meantime the average interest cost of bank deposits has been greatly reduced. Third, in 1917 the Federal Reserve organization was new, and was, without disparagement, manned with amateurs. While its policy was applauded at the time, the aftermath brought a series of popular and congressional attacks, from which the system never fully recovered its initial prestige. The system enters this war not only with its prestige at relatively low ebb, but with its actual power greatly reduced. Against this may be set one fact of major significance—it is manned by experienced professionals. In comparison with most of the other groups in Washington, it is a veteran organization manned by veterans in their particular duties and responsibilities. Yet, of all the agencies of government, it is neither endowed with powers commensurate with its responsibilities nor authority proportionate to its knowledge and experience. Twenty-five years ago, the Reserve System had powers which it did not fully comprehend; and their use under a combination of inexperience, diffidence and political pressure, brought consequences, which, although not disastrous, were

extremely costly. In the intervening years, the Reserve System has accumulated knowledge, experience, and technic; it knows how to use powers which it no longer possesses."

In leaving the general for the particular, it may be repeated that the history of national and State banking forms the background of local banking. The smallest bank is influenced by the finance and economics of its day. For causes already outlined, northwestern Pennsylvania banking did not get started in an important way until after Civil War times and its activities have conformed to the changes in national banking to a large extent. It is a business calling for the best in initiative, enterprise, sound judgment, reasonable conservatism and authentic endeavors to be of service to the public, but it never can escape from the effects of national conditions, State and Federal laws, or the constant variations in the economic factors of our country as a whole. A century and a little more ago, this part of Pennsylvania suffered the effects of the ups and downs of State banks and the vagaries of Federal banking and unsound currency by both. There was the Erie Bank, founded in 1828, that suspended twenty years later. There was also the Erie Branch of the United States Bank, at Philadelphia, established in 1836, which went down, with its parent organization, a few years later.

The Commonwealth was constantly, during these early years and down into the present century, passing laws that by regulation would improve the security of banks and depositors. In New York, on April 18, 1838, there was set up the so-called "Free Banking System" which, frequently amended, was the model after which the National Banks were patterned in the eighteen sixties. "Free" was the right name for this law, which was followed fairly closely, for it had too few barriers and too many places where it was possible to jump the fence. It is a matter of common record that to establish a law is a strong incentive to getting around that law.

To illustrate: Most of the banking laws up to the Civil War endeavored to make illegal the issue of notes without the backing of securities or other assets, an excellent idea. Shrewd financiers, crooks and honorable men, were not long in putting a good law to bad uses. The loophole in legislation was time and distance, and there began an era of the wildcat bank, with northwestern Pennsylvania as one of the favorite regions for exploitation. The basis of the wildcat bank was a group of individuals who would make a deposit of specie or collateral with the State Comptroller as security for the circulation

of bills or notes to a larger amount than the collateral. As the scheme was worked, some man or company, far from Philadelphia, for instance, would organize a pseudo bank in one of the less populated counties in the far corner of Pennsylvania, where a prominent merchant sponsored the concern and made his business place the headquarters at which all notes issued could be redeemed. This man's signature was required on all such notes redeemed, and if he chose to absent himself from his place of business, or the village itself, for long periods, he was hard to reach and the notes remained long in circulation. Only the obstinate would make the long journey by horseback or wagon to the western town to obtain specie for his bills or notes, so that most of these were sold at a discount, or left in circulation at reduced values. While it lasted it was a grand get-rich-quick scheme—the issue of large quantities of unbacked notes, long circulation, and such big discounts as to discourage collection.

It is but fair to indicate that these organizations were not banks of deposit, but enterprises for the circulation of notes. It likewise is but fair to point out that some of these wildcat banks became institutions that conscientiously and well served primitive but growing communities of the twelve northwestern counties. Early banks of deposit and loans aided notably local commerce, and business, and the financing of farmers, lumbermen, oil prospectors and the like. To the credit of northwestern Pennsylvania it should be said that in the matter of wildcat banks it had far fewer than the contiguous sections of the west. At the risk of being repetitious and giving over-emphasis to the relatively unimportant, we quote a comment from a very old "History of Erie County" (1884):

"Located between New York and Ohio, far away from the wealthier portions of the State, Erie County suffered all the evils of the miserable currency which prevailed before the greenbacks and National bank notes were invented. With the exception of a few years, there was no bank of issue in the country, and the only banking institutions were private brokers' offices.

"The best currency of those times was New York bank notes, and the poorest, those of the Western banks. Pennsylvania bank notes had only a small circulation in the county, and held a place in popular estimation intermediate between the above. There was a discount on all these, ranging from one to twenty per cent. It was for the interest of the private

bankers to circulate the notes on which there was the largest discount and, as a consequence, the county was flooded with the bills of banks the locations of which were hardly known.

"Every business man had to keep a 'Bank Note Detector,' revised and published monthly or weekly, on hand, and was not sure then that the notes he accepted would not be pronounced worthless by the next mail. To add to the perplexities of the situation, there were innumerable counterfeits which could with difficulty be distinguished from the genuine. Granting that the bank was good, and that the discount was properly figured, there was no assurance that the bill was what it was purported to be. All this was a terrible annoyance and loss to the people, but it was a regular bonanza to the 'shaving shops.' Even of the uncertain bank notes, there was not enough to do the business of the community.

"Most of the buying and selling was done on long credit, and occasionally a manufacturing firm, to ease itself along and relieve the necessities of the public, would issue a mongrel coin, which went by the name of 'pewterinctum.' This condition of affairs lasted until a year or two after the Civil War broke out."

Northwestern Pennsylvania welcomed the National Banking Act signed by President Abraham Lincoln, February 25, 1863, and a number of institutions were formed or organized under its provisions from existing banking firms. After the internecine conflict was over, the State bank regained lost ground because, under proper regulation, its system of the business of discount, loan and deposit was suitable to smaller towns and banks. The State bank made gains up to the 1890s, since when the trend in most of the counties has been in the direction of fewer commercial banks of all kinds with increased resources and capital. Savings institutions began to function some years before the Civil War and they filled a very real need of the less wealthy; indeed, they were called for a time "the poor man's bank." The trust company in northwestern Pennsylvania came in at about the turn into the present century. It performed so many functions that it sometimes has been dubbed "the department store of finance." For many years consolidations have been frequent, so that the usual activities of State or national banks, savings and trust companies, are departments of a single strong institution.

The history of banking in northwestern Pennsylvania is very much like that of western New York and western Pennsylvania, outside of

the large cities, with one exception—the impact of “black gold” upon finance, and its after effects upon the rise and fall of banks, in the “oil counties.” The commercial production of oil brought on a tremendous boom along all lines in several sections. There were vast numbers of deals in oil, oil rights, leases, the founding of companies, purchase of equipment and a dozen other details that required the exchange of money and securities. Much of the cash came from outside the counties, but it was necessary to have places of deposit, loan and payments, and some banks were established in towns that grew from a few persons to thousands within a few years and shrank in size almost as rapidly as they had grown. The birth and mortality rates among the banks of the oil counties and their neighbors have never been estimated; and only in exceptional cases has much been written about the institutions that have survived that strange interlude in the development of what were by nature forest and agricultural districts. Oil still remains the basis of an important industry contributing largely to the prosperity of the north-central counties, but it, like banking, has long settled down from its once frenzied condition.

Northwestern Pennsylvania possesses an unusual number of banks (117), in proportion to its population, about three-quarters of a million people. The combined capital of these banks is above nineteen and a half million dollars, and they have resources totaling almost a third of a billion dollars, indicating a sound average of capital and above the average of resources. (The figures are of December 30, 1940.) There are not too many banks in this part of Pennsylvania, rather there are too few, although some financiers might not agree with this conclusion. Dissimilar conditions rule in the twelve counties that have been grouped in this history as one section. These twelve cover an area that is larger than any one of six other states of the Union, and practically the equal of two or three others. Wide distances separate the towns, boroughs and cities. Nearly a hundred banks are located in what are not large communities, and these, in the days when automobiles were still being made and gas and tires were not rationed, made it possible for most citizens to be within easy reach of some bank. Even the casual visitor, glancing at a map upon which the various institutions of finance are marked by dots, gains the impression of excellent distribution and universal service to the public.

It is a puzzling fact that the historians of northwestern Pennsylvania have shown little interest in banks, and when mentioned the

record is simply factual and usually inconsequential. Just why the story of the establishment of a shoe store, a factory, church, theatre or hose company should be considered to be of more interest or value than that of the institutions that had more to do with the financing of the progress and prosperity of a community, is hard to fathom.

The present compiler is going to "take samples," as the modern scientific expression goes, from county histories, chiefly old, of early banking history of several sections, beginning with Erie and Clearfield counties. The first is the largest in population, the second biggest in area, and they are separated by the longest distances in northwestern Pennsylvania. For Erie County, we must go back to the "Twentieth Century History of Erie County," published in 1909. For Clearfield County his source is mainly "Clearfield County," published in 1925, by Thomas Lincoln Wall.

Erie City, despite Corry and sixteen boroughs, is the dominant place in the county of the same name. As New York City, by reason of its population, is the tail that frequently wags that State, so Erie City is accused of performing the same act in the county. In its past, it was a center for "wild-cat" banks, the source of immense quantities of "shin-plasters" and other bank notes of doubtful value and, in its primitive and later days, a community of uncertain attributes. Evidence of this is lacking, so one may pass unnoticed the suspicions aroused in its neighbors as jealousy, perhaps. It took the lead, whatever one may say, in substantial banking. In 1828 the first Erie Bank was incorporated by the Pennsylvania Legislature. It suspended in 1848, with small losses due to the first and only president, Rufus S. Reed, who discounted its notes. In 1836, the United States Bank of Philadelphia established an Erie branch, with Thomas H. Sill as president. When the parent bank collapsed a few years later under the executive orders of President Andrew Jackson, so did the first Erie Bank go under. Its fine marble building, better known as the "Old Custom House," erected in 1837 at a cost of \$70,000, was sold in 1849 for \$29,000.

Other early Erie banks were the Erie City, founded in 1852 and suspended in 1857; the Bank of Commerce, opened in 1858 and closed in 1860; after which for three years there was no bank of issue in the city. During this interim banking business was carried on in Erie by the private firms of W. C. Corry, M. Sanford & Company, Vincent, Bailey & Company, Clark & Metcalf, and Neiler & Warren. No doubt others helped fill the gap between State banks

and national banks. The First National Bank, established in February, 1863, was the twelfth institution in the United States to receive a charter under the Act of Congress creating national banks. It was the successor to M. Sanford & Company, private bankers of 1852-63.

The Security Savings & Trust Company was incorporated October 3, 1903, and moved into the quarters of the former Keystone National Bank. The latter institution was formed in 1864, reorganized in 1884, and went into the hands of a receiver, 1897. The Second National Bank, founded December 12, 1864, was successor to W. C. Curry, private banker, who served as its first cashier. The Marine National Bank was organized March 9, 1865, succeeding the banking house of Vincent, Bailey & Company, founded in the 1850s. On April 16, 1866, the Erie Dime Savings & Loan Company was chartered, and was ready for business June 8, 1867. After a varied experience, it was reorganized in 1902 as the Erie Trust Company, under a State charter of August twenty-fifth of that year. The Security Savings & Trust Company received a charter October 3, 1903, and was another company which used the building of the old Keystone National Bank. The Peoples Bank of Erie was incorporated in October, 1905. The Erie Clearing House was set up in February, 1903, to perform a much-needed function in the better and quicker dispatch of business. Its first officers were: C. A. Allis, chairman, and John R. McDonald. A. J. Hartleb is its present (1941) head.

It is possible, if not profitable, to name a number of well capitalized banking and related ventures in the City of Erie that ended in failures, such as the German Savings Institution, incorporated in 1867 with a capital of \$200,000, a really large sum for its times, but which came to an end in 1885; or the Humboldt Safe Deposit & Trust Company, which did business from July, 1869, to 1885. Brevity has marked this story of Erie banking, because later in this chapter there is related the histories of the Erie City banking institutions, the most of which go back to the banks already mentioned.

As regards Erie County, outside the city, there are a number of financial institutions of varying ages. As regards the older ones, there is, or was, the Citizens National Bank of Albion, founded in 1898; the First National Bank, incorporated September 14, 1909. In Girard, R. S. Battles, with C. F. Webster, went into private banking in 1859, which was the forerunner of the First National Bank of Girard (or the Girard National Bank), founded in 1863. Although its career was ended at the end of its chartered period, the R. S. Bat-

tles Bank functions today with C. Elizabeth Battles as owner. The National Bank of Girard dates from August 24, 1904.

Corry, important city of Erie County, made little banking history prior to the establishment of its Citizens National Bank and the National Bank of Corry. North East, a smaller municipality, had much more experience before settling down to its present strong banks. In 1860, A. W. Blaine opened an office in the borough, and five years later this became the First National Bank of North East, which operated until 1884. The Peoples Savings Bank was incorporated in 1870, and on May 14, 1883, absorbed the banking business of what had been (first) Blaine, Gould & Short, dating from 1871, and (second) Short, Blaine & Company. On January 25, 1895, the Peoples Savings Bank suspended, and within five days Samson Short, former president, started a bank to take over the interests of the Peoples. Depositors were paid in full by June 30, 1896, and on July first of that year, W. D. Adkins & Company set up in business. W. A. Ensign & Company, the successors of the First National Bank, failed in December, 1907. Since August 1, 1903, the First National Bank of North East has been serving the public. Its first president was A. W. Blaine. The National Bank of North East was founded in June, 1908, with R. A. Davidson at its head. Union City, Erie County, since 1800 prominent in wood-using industries, especially furniture and similar products, was unfortunate with most of its banking enterprises until almost the present century. More than one failure occurred, including the supposedly strong Union City National Bank, in the 1880s. The National Bank of Union City was chartered in 1898, as successor to the Farmers' Coöperative Trust Company. The above bank has been notably successful. The Home National was incorporated in 1908. In Edinboro, a Peoples Bank began operating on September 2, 1892, but in August, 1904, was incorporated as the First National Bank of Edinboro. An Edinboro Savings Bank was organized in 1896. There are other places in the county now supporting banks (two-thirds of the nineteen banks of Erie County are outside the metropolis), but of their banking history not much is known.

In our sampling of ancient banking history in northwestern Pennsylvania, let us cross to the farthest point from Erie County, the county of Clearfield, largest of the twelve divisions, third largest in population, and having the same number of banks as six of the other

counties. It is wholly unlike Erie County in topography, natural resources, industries, development, and is not dominated by one large city. The growth of its financial institutions, as told by historians, is not very different from Erie or other counties. Of what the pioneers did with their money (if any), whether deposited in the strong box of some store or tavern keeper, how the people were affected by changing values in paper currency and the lack of specie, and who were the first private bankers and organized groups, there is very little information. Banking in Clearfield County seems to have dated, officially, only from 1859, although the county, according to the census of 1860, had a population of 18,759.

Following closely an article written in 1925 by H. B. Powell: The first bank in Clearfield County was the private enterprise organized March 16, 1859, as the Leonard, Finney & Company, which wound up its business December 20, 1864. The second oldest was the Clearfield County Bank, chartered with note issuing privileges, April 6, 1860. A law of June 3, 1864, taxed heavily the circulation of State banks, and the Clearfield County surrendered its charter and became a private bank under the same title and stockholders. The First National Bank of Clearfield (the second, however, in the county under the Federal National Bank law, since the First National of Curwensville was founded in March, 1864), was chartered December 14, 1864. The third national bank in the county was the County National Bank of Clearfield, incorporated February 5, 1865. In October, 1865, these three institutions had deposits totaling about a third of a million dollars. These, together with one other Clearfield (borough) institution, increased in wealth thirtyfold in the following sixty years.

About 1870, F. K. Arnold, private banker, opened for business in Luthersburg, later removing to the town of Reynoldsville. In 1871 Lloyd Caldwell, Lawshe & Company began a private banking business in Osceola Mills, Pennsylvania. DuBois, the only city in the county, was born late and its first financial institution was not initiated until September 1, 1880, the DuBois Deposit Bank, which later became the Deposit National Bank; the First National of DuBois was formed in August, 1883, and the Bank of DuBois established years later. The First National and the Bank of DuBois eventually went out of business. Of a later date were the Union Banking & Trust Company, and the DuBois National Bank; and the Peoples State Bank of DuBois was started in the 1920s.

"Houtzdale was the fourth town in the county to rise to the distinction of a banking town. The Houtzdale Bank began business there about January 1, 1881. As time moved on, banks were organized in the following towns: Coalport, the First National Bank; Mahaffey, the Mahaffey National Bank; Madera, the Madera National Bank; Winburne, the Bituminous National Bank; Irvona, the First National Bank; Burnside, the Burnside National Bank; Karthaus, the Karthaus State Bank; Morrisdale, the Bank of Morrisdale. In the course of the years changes occurred in a number of towns and several of the institutions. The First National Bank and the Clearfield County Bank retired from business in Clearfield and in their stead came the Clearfield National Bank, which began business in 1893; The Clearfield Trust Company, which began business in 1902. Lloyd Caldwell, Lawshe & Company retired from business in 1873 and later the Citizens Banking Company of Osceola Mills was organized. In after years it became the First National Bank of Osceola, which is still in business with an honorable record behind it. Later, the People's National Bank of Osceola Mills was organized. The First National Bank of Curwensville was succeeded by the Curwensville Bank, a private institution which was later reorganized as the Curwensville National Bank, which is still actively engaged in business. The Curwensville State Bank was also organized and is now doing business in that town. In Houtzdale there now exist The First National Bank and the Houtzdale Trust Company. Clearfield County, in 1925, had twenty-two banking institutions, seven times the number which existed in October, 1865; and the deposits have increased one hundred-fold since that time to a total of about thirty millions of dollars."—H. B. Powell.

Fifteen years later (1940) Clearfield had just half as many banks (eleven), with deposits of \$19,578,676.

Back to the southwesternmost county of the region we go for early records of banking in Mercer County. Stated briefly, for the present banks in this county will come up later for further accounts, the institutions extant in this district incorporated prior to 1909, were: The First National Bank of Greenville, 1864, then West Greenville; the First National Bank of Mercer, chartered April 19, 1864; First National Bank of Sharon, founded in 1868; the McDowell National Bank of Sharon, opened as a private bank May 1, 1868; First National Bank of Sharpsville, successor to the Iron Banking Company, set up in 1873, and reorganized as the First National, in 1903;

the Jamestown Banking Company, organized July 21, 1874; the Greenville National Bank, dating from April, 1875, whose charter was continued in 1895; Farmers & Mechanics National Bank of Mercer, incorporated May, 1875; the Mercer County Trust Company, founded in 1902; the First National Bank of Grove City, incorporated in July, 1896, being the successor to the private bank of the Grove City Banking Company, started in 1884; the Grove City



(Holmes Crosby, Architect)

United States Post Office, Grove City

National Bank, organized in 1900, as the Peoples National Bank, and later consolidated with the Grove City Savings & Trust Company. The Colonial Trust Company, of South Sharon, was incorporated in April, 1902; the First National Bank, of West Middlesex, chartered August 10, 1903; the First National Bank of Stoneboro, opened for business February 8, 1904; the Fredonia National Bank received a charter in March, 1904; and the Sharpsville National Bank was organized in 1905. An unusual number of these institutions have survived the vicissitudes of the past forty years, as can be seen from the list of present-day banks in northwestern Pennsylvania included in this chapter.

Venango County, east and north of Mercer County, is nationally famous for its identification with, and former leadership of the petroleum industry. Charles A. Babcock, compiler of "Venango County, Her Pioneers and People," relates an interesting story of what was then "the oldest bank in the county," the Lamberton National Bank:

"It had its inception before the Civil War in the crude banking business done by the Hon. Robert Lamberton in connection with a general merchandising business, in a building known as the 'National Hotel' but now occupied by store rooms, on the corner of Thirteenth and Otter streets. During the early days of the oil excitement some of the citizens of the county found it necessary to have a safe depository for their money, and Mr. Lamberton owning a large safe they would bring it in to him and he would give them credit for it on his books. That was in 1859. With his characteristic shrewdness he saw that the community needed a bank, and when in 1860 he built the old Lamberton homestead, on the present site of the Y. M. C. A. building, he built a banking room in the corner, where he conducted a regular banking business under the name of R. Lamberton, Banker. This was the first bank in Venango County. It was conducted until March, 1873, when owing to Mr. Lamberton's failing health he retired and his interests were purchased by his son R. G. Lamberton, C. W. Gilfillan and R. L. Cochran, the latter formerly cashier of the First National Bank of Franklin. These gentlemen organized The Lamberton Savings Bank, Mr. C. W. Gilfillan being made president, and Mr. R. L. Cochran, cashier. They conducted the bank until 1883, when W. J. Lamberton and Harry Lamberton purchased the interest of R. L. Cochran, and Harry Lamberton became the cashier. About 1887 the owners of the bank found that it had outgrown its facilities and R. G. Lamberton built what was then considered the finest banking room in the county. The bank occupied this new building in the fall of that year. This institution continued as The Lamberton Savings Bank until October 1899, when the owners, finding the national banking laws attractive, organized The Lamberton National Bank of Franklin with a capital of \$100,000. C. W. Gilfillan was elected its president, Harry Lamberton its vice-president, and W. L. Gilfillan its cashier. At the death of

C. W. Gilfillan, in 1901, Harry Lamberton was elected president, and R. G. Lamberton, vice-president. In August 1903, W. L. Gilfillan retired as cashier to accept the position of vice-president of The Austin National Bank of Austin, Texas, and Chess Lamberton, who had been assistant cashier, was made cashier. The business of this institution grew to such an extent that in 1910 it purchased its present site on the corner of Thirteenth and Liberty streets and in July 1912, moved into its present quarters, which are most modern and elaborate in every detail and considered the finest bank building in Northwestern Pennsylvania. It is really a monument to the name of Lamberton, which has been synonymous with stability and conservatism in Venango County for more than half a century."

As of the year 1919, banking facilities in Venango County were provided by the First National Bank of Franklin, established in 1863; the Franklin Trust Company, organized in 1901; the Exchange Bank of Franklin, born in January, 1871, in the Exchange Hotel, on June 20, 1888, was incorporated under the State Law of May 17, 1876.

Oil City, long the largest municipality in Venango County, had and has more banks than any other community. The first surviving to 1920 was the C. V. Culver Bank, founded in 1861, which later was merged with the First National Bank, organized November 5, 1863, and chartered on January fifth of 1864. The Oil City Bank, incorporated in 1864, was a bank of issue, one of the several sponsored by C. V. Culver during the early oil boom, and suspended in 1866, when the great banking house of Culver, Penn & Company, of New York City, failed on March 27, 1866, the repercussions of which were felt heavily by the oil regions in Pennsylvania and New York. In Oil City there was also the Lamberton National Bank, the outgrowth of a banking business started in 1862 by Robert Lamberton and Calvin W. Gilfillan. Operated first as the Lamberton Bank of Oil City, it was reorganized and nationalized in 1900. Other banks of the city were the Oil City National, founded on August 15, 1865, as the Oil City Savings Bank, continuing as such until January 1, 1900. Later, in 1918, this institution and the Lamberton National Bank were merged as the Oil City National Bank (*q. v.*). The Lambertons continued their identification with finance in the county, as did the veteran H. H. Stephenson, of a half century of service as

cashier and president of the Oil City National Bank. The Oil City Trust Company was opened for business November 1, 1871; F. W. Mitchell & Company, a private banking house, was organized November 3, 1873, and enjoyed a high degree of prosperity before withdrawing in the 1890s. The Citizens Banking Company, operating under a State charter, was started in 1902.

In 1919 the banks in Venango County included: The Emlenton Bank, organized on July 23, 1873, by an exceptionally strong group; it became a national bank on August 3, 1891. The Farmers National Bank of Emlenton was formed in 1900; the Peoples National Bank of Clintonville was founded in 1908, and formerly used the building of the old Clinton Bank, set up in 1877 and was nationalized in 1902. The First National Bank of Emlenton closed in 1908, its building being purchased by the Peoples Company. Venango County, in 1941, had eleven banks.

Moving northeast once more, one comes to Warren County, bordering New York on the north. It is a section where the manufacturing industries, mainly in metals and metal products, slightly exceed that of chemicals, of which the majority are petroleum products of many kinds. Although it has seven boroughs, only one approaches a population of two thousand souls, and but two others exceed one thousand. Warren, the metropolis (population in 1940, 14,891), is the seat of most of the financial institutions of the county, even though there were eight banks in the county. For brevity we shall consider only such banks as were in existence more than a half century ago, in the municipality of Warren.

The first bank in the county, of historical note, was the Lumbermen's Bank of Warren, incorporated February 28, 1834, by the State Legislature, and began business that same year. The enterprise was initiated with a paid-up capital of \$100,000, which within a few years was raised to \$200,000. It did an enormous business, its notes were circulated widely, but in 1838 it failed at great loss to all concerned with its affairs.

Other early banks of Warren included the Warren County Bank, chartered in the winter of 1852-53, which within twelve months became a bank of issue. It was really not in business until late in November, 1854. Because of its general interest we quote J. S. Schenck's "History of Warren County":

"Said the editor of the *Mail* under date of November 24, 1854: 'To-day (Friday) our bank is in the flood tide of

operation Certainly there never was more need of a Bank here, or a more favorable time for one to commence operations, and we hope it may have a long career of usefulness and prosperity.' In 1855 a building for the accommodation of the bank was erected. Under date of July 30, 1859, we find the following mention of this bank in the columns of the *Mail*: 'At the last term of court the *Warren County Bank* was changed to the *North Western Bank*, and under that name it re-opened last Monday. The bills of the old bank are redeemed when presented.' From this statement it appears that business under the old title had been suspended for a time. . . . In December of 1860 it was published as a noteworthy fact that all the banks in Western Pennsylvania had suspended, with the exception of the old *Bank of Pittsburgh* and the *North Western Bank* of Warren. The further existence of the latter, however, was destined to be but brief in duration; for during the latter part of May, 1862, the *North Western Bank* closed its doors. A day or two later they were reopened and an effort was made to redeem *home* circulation, but after two days this plan was abandoned. The affairs of the bank were always fairly and honorably conducted in Warren. The trouble originated in New York City, where its finances were really controlled, and where they put into circulation more of the bank's issue than could be taken care of at home."

In 1855 Augustus N. Lowry opened a private bank in Warren; and in December, 1855, Chapin Hall established "C. Hall's Bank." After the failure of the North Western Bank, Beecher & Coleman opened a banking house which was in operation until the organization of the First National Bank of Warren, organized August 6, 1864. It, with the Warren Savings Bank founded in 1870, and the Citizens' Savings Bank, established March 8, 1870, were active in 1887.

In 1938 the Merchants National Bank & Trust Company, of Meadville, published an admirable brochure, entitled "Pioneer and Modern Banking," which is the best piece of history on financial institutions in Meadville and Crawford County. It begins:

"On May 4, 1814, subscription books for the new organization of the Northwestern Bank of Pennsylvania were opened in the tavern of Samuel Torbett, 'The Sign of the

Stag,' situated on the southwest corner of Water and Chestnut streets in the Village of Meadville, Pennsylvania, now the site of The Merchants National Bank and Trust Company of Meadville. This was the beginning of banking history, not only in Meadville, but in Northwestern Pennsylvania.

"The Northwestern Bank of Pennsylvania received its charter in September, 1814, and began business in January, 1815, on the northeast corner of Water and Walnut streets, continuing as the only banking institution in Meadville until 1838, when liquidation was completed. The bank carried on a profitable business for many years, and paid regular dividends to its stockholders. At the time of liquidation all notes were redeemed and the stockholders received full payment for their stock investment.

"In 1843 John and James R. Dick began a private banking business that supplied the wants of the town in the old Dick store building on the south side of Chestnut Street where the Prenatt Company store is located. In 1850, when General John Dick was elected to represent this district in Congress, he withdrew from the firm and the banking house of J. R. Dick and Company was established, carrying on a general banking business until liquidation in 1893 in the banking house on the south side of Chestnut Street where the G. C. Murphy store is. With the exception of N. Holmes and Company of Pittsburgh, it was the oldest private bank in Western Pennsylvania. On April 24, 1888, Mr. Joseph H. Gurnsey, now a vice-president of the Merchants National Bank and Trust Company, began his banking career with J. R. Dick and Company.

"The Bank of Crawford County was established in 1863 and carried on a large business for a few years at a site in the Corinthian Block (where the Montgomery Ward store is).

"The First National Bank of Meadville, Pennsylvania, was chartered in 1864, carrying on business for more than ten years in its banking house on the west side of Water Street just north of Chestnut Street, where the Bergin Restaurant is located.

"The Merchants National Bank of Meadville, Pennsylvania, was chartered in January, 1865—when Lincoln was President—and began business on the west side of Water Street in April of that year. It is now the oldest existing bank

in Crawford County and assumed trust powers on July 1, 1930, taking the additional name of The Merchants National Bank & Trust Company of Meadville. The bank made its first published statement on July 1, 1865.

"Where the old Torbett Tavern stood the Merchants National Bank and Trust Company now carries on, and some of its incorporators were also incorporators of that pioneer institution, the Northwestern Bank of Pennsylvania. The Meadville Savings Bank organized in 1867 and did business at No. 944 Water Street for many years with Samuel P. Officer as cashier.

"In 1871 the Peoples Savings Bank was organized and occupied the old bank building of the First National Bank (where Bergin's Restaurant now is) until finally it was converted in The New First National Bank of Meadville in 1894. In February, 1886, Mr. John J. Farnicorn, now treasurer of the Crawford County Trust Company, began his banking experience in the Peoples Savings Bank, being at present the Nestor of Meadville bankers.

"In 1874 the Farmers Coöperative Banking Association did a banking business on the northwest corner of Chestnut and Market streets until the early 1890s. In 1876 Delmater & Company began a large banking business on the northeast corner of Water and Chestnut streets, carrying on for many years.

"The New First National Bank of Meadville, Pennsylvania, was organized in 1894, occupying the old First National building (where Bergin's Restaurant is) until 1908, when it moved to its new building on the southwest corner of Market and Chestnut streets, assuming trust powers in 1924 and taking the name of The First National Bank of Meadville, Pennsylvania, in 1930.

"The Crawford County Trust Company was organized in 1900, taking the old banking location of J. R. Dick & Company, and in 1911 occupying its new banking house on the northwest corner of Chestnut and Market streets. The Commonwealth Bank was organized in 1910, beginning business on the northeast corner of Chestnut and Market streets, where it carried on until its merger with the Crawford County Trust Company in 1920."

More than a century of service to the people of Crawford County has been rendered by the Meadville banks, aiding the farmer in his purchase of improved breeds of sheep that made Crawford County's wool crop more than a million pounds annually prior to 1840—making possible the building of the Meadville church, the first brick church in this country north of Pittsburgh, serving many public enterprises, as well as private ones—the turnpikes, bridges, plank road companies, the Crawford Mutual Insurance Company, Meadville Gas & Water Company, the Atlantic & Great Western Railway Company (the predecessor of the Erie Railroad Company), all sound and legitimate industries and mercantile projects for which the people in Meadville and vicinity were and still are noted. The Meadville banks shared with our enterprising citizens the credit of making this county what it is today.

The history of Meadville banking covers 123 years and is a cross section of banking in the United States for a similar period. It is a far fling from the iron-banded oak strong-box with padlock and key of the old Northwestern Bank of Pennsylvania to the modern steel and concrete vaults with time locks of the Meadville banks—from the old bank notes engraved by each individual association, to the standard currency of the United States. It has carried on through wars, pestilence, depression and prosperity.

These sketchy samplings of the early history of banking in several counties of northwestern Pennsylvania, while geographically a cross section of the region, throw but a dim light on the development of banking in general, and but little more on the history of some banks that survive to the present day. Partial records of these will conclude this chapter. On the authority of that very fine volume, "The Tenth Industrial Directory of Pennsylvania," published by the Department of Internal Affairs, in 1941, the following material in regard to banking in the twelve counties of northwestern Pennsylvania is derived. The figures are of December 30, 1940:

Cameron County—One bank; capital, \$125,000; surplus, \$125,000; deposits, \$2,109,510; total resources, \$2,443,781.

Clarion County—Eleven banks; capital, \$984,500; surplus, \$1,135,166; deposits, \$14,352,104; total resources, \$17,778,431.

Clearfield County—Eleven banks; capital, \$1,697,000; surplus, \$1,414,000; deposits, \$19,578,676; total resources, \$23,497,236. Number of building and loan associations, six; resources, \$694,772.

Crawford County—Eleven banks; capital, \$2,025,920; surplus, \$2,747,650; deposits, \$22,478,631; total resources, \$28,729,302. Number of building and loan associations, four; resources, \$1,443,485.

Elk County—Six banks; capital, \$1,000,000; surplus, \$1,302,000; deposits, \$10,224,287; total resources, \$13,367,339. Number of building and loan associations, six; resources \$3,116,502.

Erie County—Nineteen banks; capital, \$4,949,850; surplus, \$1,568,347; deposits, \$60,320,427; total resources, \$71,203,843. Number of building and loan associations, six; resources, \$4,967,060.

Forest County—Three banks; capital, \$150,000; surplus, \$201,000; deposits, \$1,469,913; total resources, \$2,011,409.

Jefferson County—Ten banks; capital, \$985,000; surplus, \$843,500; deposits, \$11,702,047; total resources, \$14,321,867. Number of building and loan associations, two; resources, \$229,901.

McKean County—Ten banks; capital, \$2,060,000; surplus, \$1,588,500; deposits, \$33,748,905; total resources, \$38,391,737. Number of building and loan associations, three; resources, \$2,249,905.

Mercer County—Sixteen banks; capital, \$2,032,813; surplus, \$1,271,275; deposits, \$33,064,251; total resources, \$40,008,151. Number of building and loan associations, three; resources, \$961,467.

Venango County—Eleven banks; capital, \$1,807,000; surplus, \$4,951,000; deposits, \$32,797,816; total resources, \$42,967,134. Number of building and loan associations, four; resources, \$4,254,588.

Warren County—Eight banks; capital, \$1,650,000; surplus, \$1,008,150; deposits, \$19,185,433; total resources, \$23,345,329.

As a contribution to future historians, and to those desirous of learning something about the 117 banks and similiar institutions extant from 1940 to 1942, the following records of these institutions are compiled. An endeavor was made to have this account comprehensive by inquiry from the respective banks. Where material was graciously furnished by individual banks, the records of these institutions are given priority in that part of the chapter which follows. They are not, however, to be taken as sketches written by an official in each bank, for many changes have been made by the compiler, items have been subtracted or added, and more often than not there has been rewriting from general bank publications.

Emporium—The Emporium Trust Company, of Emporium, Cameron County, is the only bank in Cameron County and renders every banking service to its customers. Regular dividends have been paid on the capital stock of the bank for several years.

The Emporium Trust Company was incorporated on February 9, 1928, and commenced business on May first of that same year. The paid in capital was \$125,000. The bank's quarters were in the Creighton Building, where they still exist today. During the year 1934 these quarters were completely remodeled in order to provide better working conditions and more space. Since its inception the bank has shown remarkable progress, having grown from a very small institution to a bank with resources of well over two and one-half million dollars. In addition, a trust department is operated, which takes care of the fiduciary needs of the community. In 1942 capital of the bank is \$125,000; surplus, \$175,000; deposits, more than \$2,000,000; total resources, exceeding \$2,500,000.

The 1942 officers of the bank are: B. G. Erskine, president; M. F. Balcom, vice-president; Jasper Harris, secretary; Robert A. Taylor, treasurer; R. L. Lunn and Wayne Smith, assistant treasurers. Directors: B. G. Erskine, M. F. Balcom, M. J. Dolan, Jasper Harris, James Moran, Robert A. Taylor, and H. Ward Zimmer.

Foxburg—The Foxburg Bank & Trust Company, of Clarion County, dates from 1870, when the Foxburg Savings Bank was organized and began business in a hardware store then located near the present location of the Pennsylvania Railroad Station. The directors were: Orange Noble, J. W. Hammond, Selden Marvin, John Fertig, J. C. Porterfield, V. T. Palmer, and Barney Vensel. Officers were: J. W. Hammond, president; John Fertig, vice-president; and E. W. Matthews, cashier. At a later date branches were organized in St. Petersburg and Turkey City and about this time J. V. Ritts became interested in these banks.

In 1871 the bank moved to a building which occupied the site upon which the present structure stands. It continued to do business as the Foxburg Savings Bank until March 1, 1881, when the Foxburg Bank was organized to succeed it. It began business with Joseph M. Fox, Jesse Smith, John C. Porterfield, G. C. Fink, M. Mandeville, H. H. Porterfield, and M. R. Morgan as directors. The officers were: Joseph M. Fox, president; Jesse Smith, vice-president; and M. R. Morgan, cashier. In 1882 Frank L. Harvey entered the bank as an employee and was thereafter very much interested in its affairs.

Harry R. Harvey, a brother, has also been identified with and rendered honorable service to the bank for a long period. At present he is a director and secretary of the Foxburg Bank & Trust Company. The Foxburg Bank continued until 1921, when the Foxburg Bank & Trust Company was organized to succeed it.

On August 15, 1921, the transfer of the assets of the Foxburg Bank took place and the Foxburg Bank & Trust Company began business as a State chartered institution with a capital of \$125,000 and a surplus of \$25,000. The directors chosen to guide the new institution were H. H. Porterfield, William Logan Fox, Lewis C. Collner, Frank L. Harvey, M. R. Morgan, E. O. Jones, S. F. Amsler, J. E. Hugus, and A. W. Neely. Six of these directors were elected by the board to serve as officers and the bank was completely organized.

Time has taken its toll of those who were responsible in the early days for the successful management and it should be recorded here that they brought it safely through several panics and depressions. Much credit can be given to all who were interested in the bank from its inception back in 1870, but there were four gentlemen who gave in large measure of their time and talent. They were Joseph M. Fox, M. R. Morgan, H. H. Porterfield, and F. L. Harvey. Mr. Morgan probably was the oldest in point of service, having completed practically sixty years of service prior to his death in 1932. F. L. Harvey, who later became president judge of Clarion County, was a dominant factor in the affairs of the bank until his death in the same year.

The present officers are: L. C. Collner, president; Dr. William C. Stewart, vice-president; A. W. Neely, vice-president; H. R. Harvey, secretary; L. D. Noel, cashier; and the assistant cashiers are P. G. Green, E. W. Allen, and W. K. King. Directors: L. C. Collner, H. R. Harvey, K. L. Smith, A. W. Neely, Dr. William C. Stewart, W. W. Stewart, S. F. Amsler, S. A. Hetrick, and M. H. Mimm.

Capital, \$90,000; surplus, \$140,000; undivided profits and/or reserves, \$72,000; deposits, \$1,045,000; total resources, \$1,347,000.

New Bethlehem—First National Bank, New Bethlehem, Clarion County, was established in 1872. In 1920 Alfred H. Smith joined the staff of the First National Bank, with which he has since been associated (1942). Beginning as a clerk he was soon promoted to teller, and continued his progress within the organization with his appointment as assistant cashier in 1924. In 1939 he was elected vice-president and a director of the bank, in the management of which he now plays a leading part.

As of December, 1941: Capital, \$200,000; surplus, \$200,000; undivided profits and/or reserves, \$100,000; deposits, \$3,911,000; total resources, \$4,411,000. Officers: Charles E. Andrews, Jr., chairman of the board and president; A. S. Johnson and Alfred H. Smith, vice-presidents; Eugene Woods, cashier; Frank Ferguson, assistant cashier and trust officer; J. Clyde Miller and Loudon Stuart, assistant cashiers and assistant trust officers; W. M. Stark, assistant cashier.

Clearfield—The County National Bank at Clearfield, Clearfield County, was opened for business on February 10, 1934, succeeding the County National Bank of Clearfield. The original institution was chartered as a national bank on February 5, having been formed by a group of enterprising citizens. The organizers of the bank were: James T. Leonard, William A. Wallace, G. L. Reed, Richard Shaw, James B. Graham, and William Porter. These, together with A. K. Wright, composed the first board of directors. James T. Leonard was elected president and served until his death in 1882. Thomas H. Forcey served in that office until his death in 1905, when he was succeeded by H. B. Powell, who continued as head of the bank for twenty-eight years. The following persons have served successively as cashiers of the bank: W. V. Wright, 1865-67; D. W. Moore, 1867-70; W. M. Shaw, 1870-89; H. B. Powell, 1889-1905; J. L. Gilliland, 1905-14; R. I. Fulton, 1914-33.

The original capitalization was \$100,000, which was increased to \$300,000 in 1903; and to \$500,000 in 1911. The first quarters of the institution were in a one-story building on North Second Street opposite the courthouse. This structure was removed in 1870 and the bank occupied a room in a small one-story building on North Second Street across from the courthouse. In 1870 this building was removed. The bank then occupied a room in the brick building known as the Old Masonic Building. In 1880 it purchased and moved into the building now occupied by Helmbold & Stewart on Market Street. The present building, at the corner of Market and Second streets, was erected in 1890. At first the banking room occupied only a part of this building. A room at the rear of the building on the Market Street side was occupied by the Adams Express Company. In 1906 the building was remodeled and this portion taken into the banking room. Later adjoining property on Second Street was purchased and remodeled to form part of the bank room. In 1928 the building was further enlarged by the inclusion of the Har-

der Building on Second Street, which had been purchased by the bank some years earlier. This makes the present banking room the largest quarters of any bank in this region.

The banking crisis of 1933 led to liquidation by Federal authorities and The County National Bank at Clearfield was opened for business on February 10, 1934, but within a reasonably short time had paid all its creditors in full with interest, leaving a substantial equity for its shareholders, and purchased and continued to occupy the building at the corner of Second and Market streets. That the good will built up by the old bank through its years of service in the community was very largely carried over to the new bank is evidenced by the fact that the deposits of the latter institution are now substantially higher than those shown by the last published statement of the predecessor bank.

Rembrandt Peale was elected chairman of the board of The County National Bank at Clearfield at the time of its organization. P. B. Reed (grandson of G. L. Reed, one of the organizers of the old bank) was elected president; W. H. Thomson, vice-president; R. I. Fulton, cashier; E. Clair Davis, assistant cashier. The bank was capitalized at \$540,000, including paid in surplus. Of this amount \$225,000 was preferred stock, all of which has now been retired from earnings of the bank. The bank has a staff of twenty-one persons, counting the officials, and conducts a general banking business, including safe deposit vaults, trust department and installment lending. The present officers are: Philip B. Reed, chairman of the board; Roy Fulton, president; Charles T. Kurtz, Jr., vice-president; Howard M. McGarvey, cashier; E. Clair Davis, assistant cashier; Blair Sykes, assistant cashier; Eugene M. Henry, trust officer.

Cambridge Springs—The Springs-First National Bank, of Cambridge Springs, Crawford County, indicates by its name somewhat of its varied history. It is a descendant of the first banking house in Cambridge Springs, the private Kelly Bank, set up in 1877 by the Kelly brothers, J. Langley and Amas, as a copartnership. It was an exception to the private bank of its time, of which it has been said: "You place your money in its iron safe at your own risk and borrow if you must at ten percent." The Kelly brothers did not take advantage of the loose laws of their day, nor of customers, and contributed importantly to the development of town enterprises. In 1887 they went out of business, and a competitor rose to the top, the Farmers' Coöperative Association, one of a chain of banks operated in Cam-

bridge Springs, Townville, Conneautville, Evansburg (Conneaut Lake), and Meadville, where the parent bank was located. The Springs branch, commonly known as "The Farmers' Bank," survived many a period of financial stress to and after the turn of the century. In 1894 it became the Farmers' Savings Bank. In 1905 it was refinanced as a national association, and incorporated as the First National Bank of Cambridge Springs, and within two years was the sole bank in the community. On June 2, 1909, the Springs National Bank opened for business with a capital and surplus of \$60,000. On December 15, 1928, the First National and the Springs National banks merged, and awaited the completion of new and modern headquarters which were opened officially on November 23, 1931.

The present officers are: W. A. Baird, president; R. C. Rider and Elias Drake, vice-presidents; G. E. Sundean, cashier; and B. A. Boylan, assistant cashier. Directors: W. A. Baird, B. A. Boylan, Elias Drake, C. P. Levine, D. L. Mathews, C. H. Pettit, R. C. Rider, Homer Turner, and Charles Tuttle.

Bank statement as of December, 1941: Capital, \$75,000; surplus, \$16,000; undivided profits and/or reserves, \$38,000; deposits, \$826,000; total resources, \$955,000.

Meadville—Merchants National Bank & Trust Company, of Meadville, Crawford County, is seventy-eight years old and during this long period has survived eminently well the various banking vicissitudes of the United States. It is worthy of more than passing note that its history indirectly goes back to the primitive stages of banking in western Pennsylvania, for some of its incorporators were also incorporators of the old Northwestern Bank of Pennsylvania (1814), the first banking institution north of Pittsburgh and west of the Alleghenies, and part of its personnel was connected with that of the original Merchants National Bank of Meadville, which received its charter in January, 1865, and began a fine business on the west side of Water Street in April of that year. In July, 1865, the organization paid its first dividend and in its official report indicated a capital of \$100,000; United States bonds to an equal amount deposited with the Federal Treasury, and holding individual deposits of \$106,351.02. What might be rated as total resources amounted to \$292,456.50.

Since the beginning the presidents of what is now the Merchants National Bank & Trust Company of Meadville have been: James E. McFarland, 1865-66; John McFarland, 1866-81; Alexander Power,

1881-88; James E. McFarland, 1888-99; William S. McGunnegle, 1899-1916; John E. Reynolds, 1916—. During this same period the cashiers have been: John Porter, 1865-66; James E. McFarland, 1866-88; W. S. McGunnegle, 1888-1900; John E. Reitze, 1900-13; E. F. Weber, 1913-26; H. S. Tripp, 1926-29; E. G. Otey, 1929-30; J. H. Gurnsey, 1930-36; John D. Bainer, 1936—. Previously in this chapter is a history of banking in Meadville for which we are indebted to President John E. Reynolds.

The 1942 officers of the bank are: John E. Reynolds, president and trust officer; John D. Bainer, vice-president and cashier; C. T. Campbell, vice-president; J. H. Gurnsey, vice-president; A. E. Dunham, assistant cashier; C. P. Heckman, assistant cashier; N. A. Yeager, assistant trust officer; John W. Tracy, assistant cashier and comptroller. Directors: John E. Reynolds, A. R. Huidekoper, C. Theo Campbell, C. A. Gilbert, L. J. Culbertson, W. J. McClintock, J. H. Gurnsey, T. C. Frame, Robert S. Bates, and John D. Bainer.

The statement of April 4, 1942, is as follows: Capital stock, common, \$150,000; surplus, undivided profits and reserves, \$315,044.97; reserves for interest, taxes, etc., \$4,876.43; deposits, \$4,079,992.91; total resources, \$4,557,484.89.

Titusville—Titusville Trust Company was incorporated in November, 1917, and opened its doors for business on March 18, 1918. The original capital was \$350,000 and paid-in-surplus was \$350,000. James Curtis McKinney and Frank von Tacky were the organizers of the bank, and the bank building, upon completion at a cost of about \$250,000, was presented to the stockholders by Mr. and Mrs. McKinney as a memorial building. James C. McKinney was one of the early oil producers, having been active in this field almost from its beginning, and Frank von Tacky owned and operated one of the early refineries. In June, 1928, the Commercial Bank & Trust Company merged with the Titusville Trust Company.

The Titusville Trust Company has a capital of \$650,000; surplus of \$2,000,000; undivided profits and reserves, \$245,702.77; deposits, \$4,678,236.37; total resources, \$9,773,939.14. Louis C. McKinney is chairman of the board; president, R. J. Hopkins; vice-presidents, E. T. Roberts, Willis E. Fertig, and C. L. von Tacky; secretary-treasurer and trust officer, F. D. Hill; assistant secretary-treasurers are W. A. Love and R. B. McKinney; assistant trust officer, E. R. Dutton; general counsel, W. B. Griffen. Directors: Frank P. Allen, John F. Barber, S. S. Bryan, Bennett Davis, J. T.

Dillon, Jr., Willis E. Fertig, J. E. Fleming, N. T. Francis, H. H. Haskell, John S. Haskell, Dr. C. M. Hazen, Louis C. McKinney, R. Bruce McKinney, J. J. Oakleaf, E. T. Roberts, C. L. von Tacky, and E. F. von Tacky.

Ridgway—The Elk County National Bank, at Ridgway, Elk County, was established in 1874 as a copartnership institution and was originally located on Main Street, east of the Hyde Hotel. The bank was reorganized and became a national bank in September, 1895. The first officers were: Jerome Powell, president; W. H. Hyde, vice-president; and M. S. Kline, cashier. In 1890 the bank was moved to its present location which, in the years 1906-07, was remodeled and made into one of the most modern banking houses in this part of the State. The history of the Elk County National Bank is one of unbroken success due to its prudent conservative methods, its liberal dealings, and the watchful care exercised over the interest of its patrons. The 1942 officers are: Harry R. Hyde, president; Dan S. Dickinson, vice-president; W. H. Hyde, vice-president; M. H. Johnson, cashier; and A. W. Almquist, assistant cashier. Directors: Carl W. Andrews, D. S. Dickinson, Hon. J. M. Flynn, E. E. Gardner, Hon. Harry R. Hyde, W. H. Hyde, M. H. Johnson, and E. D. Smith. The authorized (1942) capital stock is \$300,000, with a \$300,000 surplus and \$22,957.67 undivided profits in addition to \$19,383.65 in reserves. The bank's liability to its depositors on April 6, 1942, was \$1,837,893.12.

St. Marys—St. Marys Trust Company, St. Marys, Elk County, has the distinction of being the only trust company in this county. It was organized and incorporated under its present title in 1903, and therefore has a record of nearly four decades of public service. It was rebuilt and reopened on February 22, 1928, shortly before the so-called financial crash hit all of the United States. Through the following years of depression, including the misnamed "Bank Holiday" in 1933, it continued its functions. In 1935 the officers of the St. Marys Trust Company were: William E. Hall, president; William Kaul, vice-president; Lyle G. Hall, vice-president; J. L. Mallinson, treasurer; E. L. Meyer, secretary; all of whom were also members to the directorate together with H. C. Stack and Andrew Kaul, III.

As of December, 1941: Capital, \$200,000; surplus, \$200,000; undivided profits and/or reserves, \$82,000; deposits, \$2,017,000; total resources, \$2,523,000; trust department resources, \$380,000.

Officers, 1942: L. G. Hall, president; William E. Hall, chairman of the board; William Kaul, vice-president; E. L. Meyer, treasurer and trust officer; W. A. Rigard, assistant treasurer and assistant trust officer; J. L. Mallinson, secretary; E. G. Smith, assistant secretary.

St. Marys—The Saint Marys National Bank of St. Marys, Elk County, Pennsylvania, the oldest institution in the community, on June 23, 1942, completed seventy-five years of service to St. Marys and the surrounding district.

In 1867, seeing a need for banking facilities for the rapidly growing settlement which was then twenty-five years old, Hon. J. K. P. Hall and associates formed a private bank under the name of Banking House of Short, Hall & Company. Some years later the interest of Mr. Short was purchased by W. H. Hyde and the name changed to Banking House of Hyde, Hall & Company. Later the interest of W. H. Hyde was purchased by Hon. Andrew Kaul and B. Frank Hall and the name changed to St. Marys Bank. In 1903 a national charter was obtained and since that date the business has been conducted under the name of The Saint Marys National Bank.

The first banking business was transacted in a room in the residence of Hon. J. K. P. Hall, which was located on the lot where the Catholic Men's Fraternal Club building now stands. Later the bank was moved to North St. Marys Street, to the room now occupied by the St. Marys Natural Gas Company. In 1900 the bank occupied its own building on North Michael Street, where the business is now conducted.

The first officers under the national charter were: President, Hon. J. K. P. Hall; vice-presidents, Hon. Andrew Kaul and G. C. Simons; cashier, J. B. Robertson; assistant cashier, H. C. Stackpole. On the death of Hon. J. K. P. Hall, in 1913, G. C. Simons was elected president of the bank and served until his death in 1925. He was succeeded by William E. Hall, the present incumbent of the office.

At the time of organization as a national bank the capital of the bank was \$125,000; deposits, \$360,000; and total resources, \$1,040,000.

At the present time (1942) the bank has capital of \$200,000; surplus and undivided profits, \$574,000; deposits, \$3,000,000; and total resources, \$3,800,000.

The present officers (1942) are: President, William E. Hall; vice-president, William Kaul; vice-president and cashier, C. E. Hartman; assistant cashiers, C. E. Benson and W. C. Thompson.

St. Marys—The Farmers & Merchants Bank, of St. Marys, Elk County, has as its slogan, "The Bank for Savings," which is correctly descriptive. Organized in 1903 by George Werner, Philip Kerner, H. J. Gregory, M. F. Fuenffinger, Michael Brunner, Gerhard Gausman, N. J. Tierney, F. A. Hauber, and Mrs. H. J. Biber. All have passed on except the first three names, each of whom is an important official of the bank. Starting with an original capital of \$20,000 and without a surplus, its present high capitalization, surplus and profits are the accumulation of earnings of the institution and special dividends declared.

One of the results of most excellent management has been the payment of dividends from the beginning—six per cent. up to 1933, when these were reduced all over the Nation, when the usual two per cent. was paid until January, 1942, when they were raised to six per cent., a rate equalled by few other similar institutions.

As of December 31, 1941, the officers are: George Werner, president; A. J. Hauber, vice-president; George S. Rupprecht, vice-president; Arthur A. Werner, cashier; F. J. Werner, and Arthur G. Werner, assistant cashiers. Directors: F. J. Werner, Arthur A. Werner, Philip Kerner, George S. Rupprecht, J. M. Smith, Joseph H. Mallison, George Werner, H. J. Gregory, Alois J. Hauber, Edw. J. P. Jacob, A. J. Bayer, and Charles I. Houston. The capital stock is \$200,000; surplus and profits, \$142,626.19; deposits, \$993,716.68; total, \$1,336,342.87.

Erie—The Marine National Bank of Erie, Erie County, was established in 1864, under a charter numbered 870, being the successor to the private banking firm of Vincent, Bailey & Company, started in the 1850s. The Marine's first officials were: R. B. Vincent, president, and F. P. Bailey, cashier. Mr. Vincent died in 1867 and was succeeded by James C. Marshall. The latter died and was followed in the presidency by his son, F. F. Marshall, upon the death of whom C. E. Gunnison was elected president. The first headquarters of the bank were on the corner of State Street and North Park Row until 1911, when a six-story office building was erected at State and Ninth streets, to which the business was removed.

The condensed bank report of April 4, 1942, is the source of the following financial statistics: Capital, preferred stock, \$800,000;

common stock, \$400,000; surplus and undivided profits, \$200,009.42; deposits, \$9,137,515.97; total resources, \$10,721,828.32.

The officers of The Marine National Bank of Erie, of the above date, were: Enoch C. Filer, president; L. L. Salsbury and C. G. Strickland, vice-presidents; G. J. Schaefer, cashier; B. W. Strickland, C. W. Bunce, and Benjamin Willetts, assistant cashiers; Hugh S. Darsie, trust officer; H. T. Anderson, comptroller. Directors: Charles G. Strickland, William H. Forster, A. W. Mitchell, J. R. Metcalf, Charles Jarecki, Enoch C. Filer, L. L. Salsbury, G. J. Schaefer.

Erie—The First National Bank of Erie is the oldest banking institution in Erie County based upon a banking firm of 1852, of which the principals were Judah Colt Spencer and Myron Spencer, functioning under the trade title of the Bank of Sanford & Company. In 1863, these principals, with others, organized the present The First National Bank of Erie under a Federal Charter No. 12, under the National Bank Act. The capital at this time was \$150,000 and the first president was Judah Spencer, who continued to serve until his death in 1885. The capital was later increased to \$300,000 by a stock dividend. William Spencer joined the bank in 1870 as a clerk. Upon the death of his father, the president, he became president in 1885 and served in that capacity until his death in 1920, when the vice-president, John R. McDonald, who had been with the bank about forty years, became president and served as such until his death in 1937. The 1942 president, Judah Colt Spencer, who has been with the bank since 1917, the son of the above William Spencer, succeeded him as president. In 1933 the capital was increased by cash purchases of stock to \$660,000.

The First National Bank of Erie is a member of the Federal Reserve System; the Federal Deposit Insurance Corporation; and is a designated depository of the United States. As of June 30, 1942, the statement is as follows: Capital stock, preferred, \$260,000, common, \$660,000; surplus and undivided profits, \$727,392.43; deposits, \$22,648,460.16; total resources, \$24,595,126.79. Officers: J. C. Spencer, president; Earl B. Shaw, vice-president; R. C. Mauer, cashier; assistant cashiers, J. L. Sternberg, Jr., C. P. Reilly, and L. V. Ahrens; trust officer, E. J. Mattis; and assistant trust officer, E. F. Ahrens. Directors: Dr. Otto F. Behrend, Allan D. Skinner, Robert F. Devine, Jr., D. Angus Currie, H. L. R. Emmet, Norman W.

Wilson, Herbert R. Spencer, A. E. Seidel, James B. Dwyer, W. Pitt Gifford, J. C. Spencer, and Earl B. Shaw.

Lawrence Park—The Lawrence Park National Bank is a member of The Federal Deposit Corporation, with a \$5,000 maximum insurance for each depositor. The condensed statement of April 4, 1942, shows: Capital, \$50,000; surplus, \$32,500; undivided profits, \$14,623.38; deposits, \$1,128,778.85; total resources, \$1,225,983.56. Officers: Judah Colt Spencer, president; R. F. Devine, Jr., vice-president; Charles J. Heimberger, cashier; Edward V. Lett, assistant cashier. Directors: R. F. Devine, Jr., H. L. R. Emmet, Harry M. Engh, J. C. Spencer, and A. E. Swetland.

Erie—The National Bank & Trust Company of Erie, City of Erie, Erie County, was chartered under the National Banking Act and opened for business July 12, 1934.

The bank is an outgrowth, but in no sense a consolidation, of two former banking institutions in the city, the Erie Trust Company and The Second National Bank of Erie. Neither one of these banks was allowed to reopen after the bank holiday in 1933. The dominant financial interests in each case felt that there was a place in Erie for another bank, particularly a bank such as this one, specializing in trust work and the handling of investment portfolios. The depositors of the two old banks were asked to assist in the formation of the new bank and subscribed to stock. In addition, stock was sold privately.

The original board of directors consisted of: F. H. Payne, chairman of the board; H. H. Clemens, F. F. Curtze, Alex. Jarecki, F. B. McBrier, I. D. McQuiston, F. H. Payne, and A. G. Postlethwait. The officers were: A. G. Postlethwait, president; H. H. Clemens, vice-president; A. E. Keim, vice-president and cashier; L. S. Mosher, assistant cashier; G. W. Kunz, trust officer.

The stock has a par value of \$15 per share, and was sold, originally, at \$25 a share. The comparison below shows the condition of the bank as of July 31, 1934, and April 4, 1942:

	July 31, 1934	April 4, 1942
Capital	\$300,000.00	\$300,000.00
Surplus	150,000.00	220,000.00
Undivided Profits	34,461.60	133,435.72
Deposits	1,835,347.79	6,165,993.54
Total Resources	2,373,795.89	6,864,049.71

The trust department opened with total trusts of \$18,337,751.07, and in April, 1942, has \$23,678,248.65.

The 1942 officers are as follows: A. G. Postlethwait, president; A. E. Keim, vice-president and cashier; George D. Rose, assistant to the president; L. S. Mosher, assistant cashier; George W. Kunz, trust officer. Directors: Adrian J. Collins, F. A. Curtze, F. B. McBrier, I. D. McQuiston, A. G. Postlethwait, and Frank B. Quinn.

Girard—One of the oldest and most substantial banking institutions in northwestern Pennsylvania, the R. S. Battles Bank, of Girard, Erie County, has been serving its community for eighty-three years. The bank was established in 1859 by R. S. Battles and his brother-in-law, Henry M. Webster, in the old Keystone Block, which is over one hundred years old, on Main Street, under the name of Battles & Webster. After the death of Mr. Webster, in 1877, the name was changed to the R. S. Battles Bank. Later on, Mr. Battles bought, in connection with Wilcox Library, a parcel of land across the street from the Keystone Block. A brick building, now vine covered, was erected, with modern vault and safe deposit boxes. The library, also vine covered, adjoins the bank, but sets back from the main street, with a lawn in front, making an attractive combination. Mr. Battles, who died in 1904, came of pioneer New England ancestors, his father, Asa Battles, of Guilford, Vermont, having bought the Battles farm on the outskirts of what is now Girard Borough, over one hundred years ago. The homestead, now occupied by Mr. Battles' daughter, is located on this property, which was once a virgin forest. The officers of the bank (1942) are: Elizabeth Battles, president; C. F. Webster, cashier, who has been in the bank for nearly three-quarters of a century; W. C. Kibler, aged eighty-six, has been with the bank since young manhood—a record for these two men which is probably unequalled in any bank; W. F. Kibler is assistant cashier. This private bank is the oldest in northwestern Pennsylvania, and was one of the very few to remain open during the moratorium.

As of December, 1941, bank statement: Capital, \$30,000; surplus, \$228,000; deposits, \$749,000; total resources, \$1,007,000.

North East—The National Bank of North East, Erie County, was incorporated May 28, 1908, with a capital of \$50,000 and the following officers: R. A. Davidson, president; O. C. Hirtzel, vice-president; F. M. McDonald, cashier; the board of directors, consisting of: R. A. Davidson, C. E. Lee, W. S. Wheeler, D. X. Bostwick, George E. Pierce, C. C. Hill, C. C. Hirtzel, H. E. Norris, and F. B. Moorhead.

The bank statement of December, 1941, is as follows: Capital, \$50,000; surplus, \$70,000; undivided profits and/or reserves, \$21,000; deposits, \$987,000; total resources, \$1,128,000.

The 1942 officers are: O. C. Hirtzel, president; F. B. Moorhead, vice-president; Parker Sheffer, cashier; and M. H. DeLong, assistant cashier.



(Holmes Crosby, Architect)

Borough Hall, Emlenton

Erie—The Union Bank, in the city of Erie, Erie County, was organized in 1923 and opened for business March tenth of that same year. During the almost two decades of its existence it has been both eminently progressive and successful. According to its statement of April 4, 1942, the officers of The Union Bank were: S. Boyd Gunnison, president; E. P. Wittmann and C. W. Zuck, vice-presidents; A. J. Hartleb, cashier; W. B. Bierley, secretary; E. J. Greener, assistant cashier. Directors: Charles H. English, S. Boyd Gunnison, A. J. Hartleb, D. S. Milloy, H. N. Plate, George A. Willis, Edward P. Wittmann, and C. W. Zuck.

Of April 4, 1942, the statement is as follows: Capital stock, preferred, \$150,000; capital stock, common, \$50,000; surplus, \$30,764.29; undivided profits and reserve, \$105,478.35; deposits, \$2,405,094.50; total resources, \$2,741,337.14.

Erie—The Bank of Erie, city of Erie, Erie County, was opened for business on September 8, 1918, under a State charter. It was originally capitalized at \$125,000; paid in surplus, \$62,500; its first officers being: Frederick A. Brevillier, president; John Sterling, first vice-president; Leonard Stachowski, second vice-president; John C. Wensell, cashier. Upon the death of Mr. Brevillier, on June 19, 1931, he was succeeded to the presidency by W. J. Flynn, the present incumbent. The bank is located on the corner of Twelfth and Parade streets, where it owns its three-story stone bank building. Seven thousand depositors are served, and a general banking is engaged in. In 1931 the Bank of Erie took over the Lincoln Bank of Erie.

As of their bank statement of December, 1941: Capital, \$200,000; surplus, \$109,000; undivided profits and/or reserves, \$75,000; deposits, \$1,865,000; total resources, \$2,249,000. Officers, 1942: W. J. Flynn, president; Charles Hagenlocher, vice-president; E. M. Knoll, cashier; G. E. Wozniak and W. E. Pfister, assistant cashiers.

Punxsutawney—Punxsutawney National Bank, of Punxsutawney, Jefferson County. The high lights in the story of this substantial financial institution are: Organized in 1901, with a capital of \$100,000, W. W. Winslow, president, and F. C. Lang, cashier. In 1902 Lucius W. Robinson was elected president, in 1908 he resigned and S. A. Rinn was elected to succeed him.

In 1909 a merger was formed with the First National Bank of Punxsutawney, the original name being retained. The capital was increased from \$100,000 to \$200,000.

In 1924 S. A. Rinn died and Irwin Simpson succeeded him as president. In 1926 F. C. Lang resigned as cashier, after serving twenty-five years in this office. B. W. Young was elected cashier to succeed Mr. Lang.

In 1928 Irwin Simpson died and E. H. Winslow was elected president to succeed Mr. Simpson.

In 1937 the institution absorbed the County National Bank, Punxsutawney, without change in capital structure. During that same year Mr. Winslow resigned as president and P. L. Brown was elected to this office. As of April 4, 1942, the officers were: E. H. Winslow, chairman; P. Lot Brown, president; George C. Brown and George

P. Grube, vice-presidents; B. W. Young, cashier; J. L. Kurtz, W. R. Chilcott, and M. R. Tibby, assistant cashiers. Directors: George C. Brown, P. Lot Brown, Alva L. Cole, J. Edward Doran, George P. Grube, A. L. Light, C. B. Moore, W. T. McGregor, James C. McLeavy, E. Earl North, P. L. Smith, E. H. Winslow, and B. W. Young.

The statement of April 4, 1942: Capital stock, \$200,000; surplus, \$250,000; undivided profits, \$139,295.22; deposits, \$3,472,-935.78; total resources, \$4,072,546.71.

Tionesta—The leading and the strongest of the three banks of Forest County, at the present writing, the Forest County National Bank, at Tionesta, Forest County, was established in April, 1896, with paid in capital of \$50,000 and no surplus. The first officers were: A. W. Cook, president; William Smearbaugh, vice-president; A. B. Kelly, cashier, and J. H. Kelly, assistant cashier.

In 1934 J. H. Kelly was elected president, succeeding A. W. Cook, deceased, and James D. Davis became cashier. Following J. H. Kelly's death, in 1938, the following list of officers was elected: C. B. Robinson, president; James D. Davis, executive vice-president; M. A. Carringer, vice-president; Robert M. Gay, cashier; J. A. Foreman, assistant cashier.

The statement as of April 4, 1942, is as follows: Capital stock, \$50,000; surplus, \$125,000; undivided profits, \$25,381.18; deposits, \$1,115,863.52; total assets, \$1,317,086.74.

Bradford—Bradford National Bank, Bradford, McKean County. During the administration of Rutherford B. Hayes, the nineteenth President of the United States, a meeting was held in Philadelphia, in the private office of W. C. Allison & Company, for the purpose of considering the question of establishing a national bank in the city of Bradford. This meeting was held on June 30, 1879, and on July seventeenth of that year another meeting was held at which an organization was perfected with a capital of \$100,000. William C. Allison, T. Ellwood Allison, James O'Neill, George A. Berry, and Robert F. Borckman were elected directors. The directors elected Robert F. Borckman president and John F. Merrill cashier, and authority was given them to purchase the Bradford Bank, Limited, and to make the necessary arrangements to open the first national bank in the city of Bradford, and to name it the Bradford National Bank.

Shortly after the bank's organization, prominent local business men became actively interested in its affairs. The Schonblom-Kennedy

interests became the dominating influence, and on January 8, 1884, C. F. Schonblom was elected to the presidency, with Peter F. Kennedy and William C. Kennedy members of the board.

T. H. Tomlison was cashier at this time, and he held that office until his death, which was caused by a bullet wound received during an attempted hold-up. This occurred on the morning of March 6, 1888. Following his death, S. P. Kennedy was elected cashier on April 28, 1888, which office he held until his resignation on October 6, 1896. At this time H. J. Haggerty was elected cashier.

Upon Mr. Schonblom's death, which occurred in August, 1918, Thomas H. Kennedy was elected president. In 1925 H. J. Haggerty was made president and continued in office until 1941, at which time he was made chairman of the board, and H. W. Loveland president. The other officers are: Ralph M. George, vice-president; Walter F. Beitler, cashier; A. J. Haggerty, L. L. Frear, H. J. Beck, and Ira Kennedy, assistant cashiers.

The history of the Bradford National Bank is closely interwoven with the history of Bradford. The personnel of its board have always been men who were an influence in the community's affairs. Its officers have followed the well-known cautious, conservative, yet constructive policies which have given the Bradford National Bank a reputation of character and stability. All these, together with a funded experience which each management in its turn has relied upon as a background, have made the Bradford National Bank an exemplification of progress. This is evidenced by the present capital of \$600,000; surplus, undivided profits and reserves of \$1,000,000, and total assets in excess of \$13,000,000.

Kane—Kane Bank & Trust Company, Kane, McKean County. In 1885 oil was discovered near Kane. During the following year the village was incorporated as a borough and the Kane Bank opened for business April 27, 1886, "in the rear of David Howell's store-room." The partners were Joshua Davis, W. P. Weston, James McDade, and Dr. G. H. Preston, and later B. N. McVoy. The capital amounted to \$16,000, and its first report of business done was "Seventy cents paid on a shipment of \$300.00 coin from the Warren Savings Bank, \$2.00, postage stamps; \$11,956.36 in Deposits, remittances made of \$9,343.85; \$600.00 were loaned and \$13.30 income was received from Discount and Exchange." Several moves of location were made prior to 1899, and on January 21, 1902, the partnership was succeeded by the Kane Bank & Trust Company, with a capi-

tal of \$125,000; chartered December 16, 1901. After the first president of this organization, Joshua Davis, who died November 26, 1907, came W. P. Weston (1907-19); S. K. Foote, Jr. (1919-1929); W. H. Davis (1929—), who is the present chairman of the board; C. T. Benscoter, now president and trust officer. Every president died in office up to Mr. Davis, still active in banking affairs. The bank conducts commercial, savings, trust and safe deposit departments.

The December 31, 1941, statement includes: Capital, \$200,000; surplus, undivided profits and reserves, \$144,560.14; demand deposits, \$1,177,655.95; time deposits, \$1,230,980.50; total resources, \$2,794,093.73. Trust department, \$629,746.78.

The December 31, 1941, officers include: William H. Davis, chairman of the board; Carl T. Benscoter, president and trust officer; James E. Henretta, vice-president; Walter Cox, vice-president; William A. Longshore, secretary; Cleon E. Longshore, treasurer; F. Lee Bartlett, assistant secretary; Michael Fragale, assistant trust officer; Ruth Bengston, Daisy M. Thompson, and C. J. Park, tellers.

Greenville—The First National Bank, Greenville, Mercer County, "the oldest bank in Mercer County," was organized in 1864 as the West Greenville National Bank, the "West" being dropped shortly after the borough also eliminated the word. This institution has been in constant operation since 1864. The first president of the bank was S. P. Johnson, and the first board of directors consisted of the following names: Daniel B. Packard, William Achre, Marvin Loomis, David Loutzenhiser, Henry F. Hartman, Samuel Goodwin, John McMichael, Samuel P. Johnston, and William Waugh. During the course of years the bank has been presided over by the following men who have acted as president: S. P. Johnston, William Waugh, Marvin Loomis, R. S. Johnston, G. G. Stage, W. C. Pettit, W. S. McKay, and F. A. Keck. In 1942 the officers consisted of: F. A. Keck, president; W. H. Phillips, vice-president; N. P. Mortensen, cashier and trust officer; M. L. Hittle, assistant cashier and assistant trust officer; and B. L. Collins, assistant cashier. The board of directors consists of: W. H. Phillips, F. A. Keck, F. W. Moser, J. R. Andrews, N. P. Mortensen, John R. Loutzenhiser, and Donovan H. Henry.

The December, 1941, bank statement shows: Capital, \$279,000; surplus, \$10,000; undivided profits and/or reserves, \$21,000; deposits, \$2,446,000; total resources, \$2,756,000.

Grove City—The First National Bank, Grove City, Mercer County, was organized and incorporated in July, 1896, under its present title. It succeeded to ownership of a private bank operated by A. E. Graham under the name Grove City Banking Company, which institution had existed since 1884. The First National Bank opened with a capital of \$50,000 and deposits of \$95,000. The original board of directors was: A. E. Graham, W. A. Young, J. M. Martin, T. W. Dale, and W. J. Harshaw. Within the decade, 1896 to 1906, the deposits in the bank increased from \$95,000 to \$635,000. The bank has had the following presidents: A. E. Graham, 1896-1903; W. C. Alexander, 1903-10; J. M. Martin, 1910-23; M. H. McCoy, 1923-26; A. M. Allen, 1926-41; C. A. Eakin, 1941—. The 1942 officers: C. A. Eakin, president; M. L. McBride, vice-president; F. H. Niece, cashier; P. C. Hassler and R. B. Donaldson, assistant cashiers; F. W. Daugherty, trust officer; Joseph Mulhall, auditor. The 1942 board of directors: O. O. Bashline, C. G. Drake, M. L. McBride, F. M. Bleakney, C. A. Eakin, Leonard Shelley, and A. M. Winder. The 1942 capital is \$140,000; surplus, profits and reserves, \$100,000; deposits, approximately \$2,000,000; total resources, \$2,217,000.

Sharon—The McDowell National Bank, Sharon, Mercer County, entered upon its seventy-fourth year of existence in 1942, during which long period it never closed its doors except for a few days when it obeyed the proclamation of a "bank holiday" by President Franklin Delano Roosevelt. It had its inception in the private bank of D. C. Strawbridge, who began business on the first day of May, 1868. After two years of successful operation, Mr. Strawbridge sold his banking business, in 1870, to James Bleakley, of Franklin, Pennsylvania, who changed the name of the bank to James Bleakley Sons & Company. At that time there were associated with the bank O. D. Bleakley, the son of James Bleakley, and Alex McDowell, the latter becoming the manager of the business.

In 1872 Mr. McDowell purchased the business from James Bleakley, and the name of the bank was changed to "Alex McDowell, Banker." Soon after the change in ownership, Mr. Bleakley returned to Franklin and became associated with his father in the management of the International Bank, the name under which James Bleakley conducted a private banking business. This bank later became the Franklin Trust Company and today is a leading bank in the Franklin district. The business of "Alex McDowell, Banker," prospered, and

on June 30, 1907, a national charter was secured for "The McDowell National Bank of Sharon, Pa." The new national bank purchased the interests of "Alex McDowell, Banker."

The McDowell National Bank was organized with a capital of \$150,000 and surplus of \$30,000 paid in. Since then the capital has been increased to \$300,000, and the capital, surplus and undivided profits now stand at about \$770,000. The total assets of the bank, which in 1897 amounted to \$291,000, had increased to \$900,000 a decade later.

On the organization of the McDowell National Bank, in 1907, Alex McDowell became president, H. B. McDowell was elected cashier, and William C. McDowell was named assistant cashier. Prior to this time, J. T. McDowell, a brother of Alex McDowell, had been active in the management of the private bank, and another brother, Parker McDowell, was also associated in the business.

Alex McDowell died in September, 1913. He had been engaged in the banking business for forty-three years. For thirty-seven years he had been a successful private banker, and for six years he had been president of the McDowell National Bank. In 1913 following Mr. McDowell's death, F. W. Koehler became president, H. B. McDowell continued as cashier, and S. H. Hadley became assistant cashier. In 1919 H. B. McDowell became vice-president; S. H. Hadley, cashier; and J. S. Bycroft was made assistant cashier. Mr. Hadley resigned in 1924 to become president of the Protected Home Circle, and Mr. Bycroft became cashier.

In 1922 the McDowell National Bank absorbed the Sharon Savings & Trust Company and acquired the site of the McDowell National Bank's new home at East State Street and Chestnut Avenue. The Sharon Savings & Trust Company had had a continuous existence under various titles for more than fifty years, beginning as the private bank of Zahniser & Heffling. It was later known as the Sharon National Bank. Since 1902 it had been known as the Sharon Savings & Trust Company. When purchased by the McDowell National Bank, in 1922, the Savings & Trust Company was the oldest bank with continuous existence in Sharon.

F. W. Koehler, president of the McDowell National Bank since 1913, died in February, 1933, after a long and honorable career. After the death of Mr. Koehler, H. B. McDowell became president of the McDowell National Bank. In that office today he is active head of the institution.

The men who have figured most prominently in the building up and expansion of the business of the McDowell National Bank have been: James Bleakley, Alex McDowell, F. W. Koehler, W. S. Palmer, John Forker, James A. Wright, Edward Buchholz, Harry Orchard, John R. Wilson, Robert Hannah, John H. Hannah, John C. Owsley, John L. Morrison, all deceased; H. B. McDowell, S. H. Hadley, John S. Bycroft, Jr., John H. Evans, C. W. Harpst, Henry Forker, Jr., S. M. Phillips, L. J. Wiesen, P. C. Gibbons, and H. M. Wilson. The latter is a former director of the McDowell National Bank.

The condensed statement of the bank as of April 4, 1942: Capital, \$300,000; surplus and profits, \$470,118.80; demand deposits, \$4,708,792.65; time deposits, \$4,714,132.32; total resources, \$10,230,893.98. Total trust funds, \$4,164,476.92. Officers of above date: H. B. McDowell, president; John S. Bycroft, Jr., vice-president and cashier; John H. Evans, vice-president and trust officer; C. W. Harpst, vice-president; R. M. Shontz, D. Carlton Shilling, and Florence A. Flinn, assistant cashiers; John Salcau, manager of foreign department. Directors: H. B. McDowell, P. C. Gibbons, John S. Bycroft, Jr., S. H. Hadley, John H. Evans, L. J. Wiesen, Henry P. Forker, Jr., and Lloyd D. Lininger.

Mercer—The First National Bank, Mercer, Mercer County, was organized in March, 1864. The charter was received on April 14, 1864. The bank is the successor of a private bank operated under the name of Hanna & Company, which was organized about the time of the outbreak of the Civil War, and was operated by John R. Hanna, W. M. Stevenson, and J. Van Horn. John R. Hanna, of the early firm, became cashier of the new bank which opened for business on North Diamond Street, in the Pearson Block, later moving, February 22, 1888, into the building which now houses the institution. Banking room has been remodeled three times, and now occupies what was formerly three rooms, where new and up-to-date banking equipment has been installed.

The First National Bank was organized with a capital of \$60,000, which was doubled in May, 1875. Dr. Albert G. Egbert, of Perrine, Pennsylvania, who became its first president, took four hundred shares of the stock, the remainder being distributed to business men of the town. The first directors were: A. G. Egbert, A. S. Burwell, C. W. Kline, R. M. J. Zahniser, John R. Hanna, A. J. McKean and John Trunkey. The bank has had the following presidents: Dr.

A. G. Egbert, Hon. Samuel Griffith, William Logan, A. J. McKean, R. R. Wright, and C. G. Williams, the present (1942) incumbent. Mr. Williams became associated with the bank April 16, 1888, and advanced through various positions until July 17, 1928, when he was elected president. His record of fifty-four years with a single institution approaches the unique, and his standing in Mercer County banking is exceptionally high.

The present (April 4, 1942) resources of the bank are \$3,776, 141.40, and as liabilities it has a capital of \$120,000; surplus and profits of \$227,190.98, with deposits of \$3,418,361; total resources, \$3,776,141.40.

The present personnel of the bank includes: C. G. Williams, president; W. V. Anderson, cashier; D. W. Zahniser, Theodore T. Craig, and E. L. Knapp, assistant cashiers. Directors: C. G. Williams, H. W. Allison, T. A. Sampson, W. W. Richardson, D. W. Zahniser, M. D. Weaver, and Emrys Davis.

The First National's charter is No. 392, showing there were less than four hundred (400) national banks in existence when it was organized. The bank came through the 1933 banking holiday with colors flying, being one of the first group permitted, after the holiday, to open on an unrestricted basis. It has prospered with the years, always conservative, gradually growing in strength and importance, and its seventy-eighth year finds it firmly established and having the confidence of the community.

Sharon—First National Bank in Sharon. Sharon, the largest municipality of Mercer County, is of course the financial center of the county. Although incorporated in 1841, with a population of about four hundred, it had no banking facilities until 1865, when two of James Westerman's, industrialist, associates, William Coleman and C. B. Wick, with S. Q. Porter, formed the first banking business to be conducted in the community under the firm name of Wick, Porter & Company. In November of 1865 Simon Perkins purchased the interest of Mr. Coleman and a portion of Mr. Wick's; while Mr. Porter purchased the balance of Mr. Wick's. The banking firm became known as "Porter & Perkins." Three years later Messrs. Porter and Perkins were active in the organization of the First National Bank, chartered August 31, 1868. After its formation they sold their banking interests to the new bank, and were among the first shareholders.

But the history of the First National Bank is also connected with another bank, that of Plumer, a village in Venango County, where G. C. Prather and associates in the early sixties had organized the First National Bank of Plumer. When the oil boom collapsed at that particular location, the Plumer community could not support the bank, and those active in that bank became interested in the organization of the First National Bank of Sharon. Arrangements were made to transfer the circulation of the Plumer bank to the Sharon bank.

The first directors were: T. J. Porter, grandfather of Bella F. Whitla, a director of the bank at the time of her death on February 21, 1940; James Westerman, G. C. Porter, A. S. Prather, and John T. Wilson. The original charter was for twenty years, but was renewed several times. The first meeting was held in the Shenango House, where the present Boyle Building is located. George C. Prather, the first president, served until his death in 1871, and was succeeded by John J. Spearman, who served as president for nearly forty years. The first banking room was located in the Hanson House, now known as the Carver Hotel. On October 24, 1874, the eastern part of the present banking lot was purchased from T. J. Porter, who continued to own the west portion of a forty-five-foot lot. The bank and Mr. Porter erected jointly the original banking house which it first occupied on July 1, 1875. In 1911, the bank purchased the interest of the T. J. Porter estate in the building, and immediately remodeled the banking room, by taking in both rooms on the first floor. It was this banking room that Sharon knew from 1912 until 1937. In 1937 the original building was torn down to the foundation and the present building was opened to the public on December 18, 1937. James P. Whitla retired as president because of ill health. Both his son, William F. Whitla, and his widow, Bella F. Whitla, died while serving as directors. The list of directors has always contained the names of men who have been leaders in the industrial, mercantile and professional interests in the community.

The December, 1941, statement: Capital, \$240,000; surplus, \$162,000; undivided profits and/or reserves, \$80,000; deposits, \$4,642,000; total resources, \$5,124,000. The 1941 officers of the bank are: Chauncey E. Brockway, president; Ralph R. Down, vice-president; Richard H. Starr, vice-president and trust officer; William A. Bryer, vice-president and cashier; Albert E. Heiges and Marvin L. Greenlund, assistant cashiers; Alexander Green, manager foreign and travel department; Justus F. Dilla, auditor.

Sharon—The Merchants & Manufacturers National Bank, Sharon, Mercer County. The first high spot in the history of this bank was, of course, its organization in 1903, and it opened for business on January third of that same year. C. H. Pearson, now chairman of the board, was one of the founders of the Merchants & Manufacturers, serving at its beginning as cashier, and has been on the board of directors during the entire period. Except for a few days of the "Bank Holiday" the service of the bank's clientele and of Sharon has been uninterrupted. It was authorized to reopen in March, 1933. As of December, 1941: Capital, \$175,000; surplus, \$60,000; undivided profits and/or reserves, \$93,000; deposits, \$3,499,000; total resources, \$3,834,000. The 1942 officers: C. H. Pearson, chairman of the board; C. T. Stockton, president; E. J. Bieber, vice-president; E. L. Knost, cashier; H. M. Shilling, assistant cashier.

Clintonville—The Peoples National Bank, Clintonville, Venango County. This bank was organized and received its charter on May 8, 1908. It succeeded the former Clinton Bank of this city. The first board of directors consisted of Harry Heasley, George W. Crawford, S. A. Phillips, T. B. Gregory, J. J. Gosser, C. E. Crawford, and H. J. Crawford. The bank is located in the heart of the Clintonville second sand oil belt, and has grown consistently with the community during the past thirty-five years. The bank started out with a modest capitalization of \$25,000, which has been subsequently increased until today (1942) it is rated at \$40,000 capital with \$40,000 in surplus account. Deposits started modestly around \$100,000 and have grown until today (1942) the bank boasts approximately a half million dollars in deposits, or a little over \$500,000. This bank was one of the first banks in this section to receive instructions from the Comptroller of the Currency of the U. S. A. to open for business after the so-called Banking Holiday of 1933, when all United States banks were closed for two weeks, or more, by order of President Franklin Delano Roosevelt. Therefore, the bank has consistently and continuously served this community since its organization in May, 1908. It serves a community rich in the earlier traditions of the petroleum business, and also endowed with many fine farms and profitable poultry production and dairying. The 1942 officers are: H. B. Mitchell, president; C. C. Hoffman, vice-president and cashier; E. L. Martin, assistant cashier. Directors: In addition to the three above-named, consist of H. R. Gilmore and C. C. King.

Emlenton—The First National Bank of Emlenton, Venango County, was the result of a meeting called on July 23, 1873, which was attended by Robert W. Porterfield, Henry E. Bradley, Marcus Hulings, James Bennett, C. H. Vanschaick, Robert L. Cochran, and James W. Rowland.

Articles of association were entered into and the Emlenton Bank commenced business with a subscribed capital of \$100,000 and a paid in capital of \$10,000. Its first board of directors were: James Bennett, Marcus Hulings, Robert W. Porterfield, Henry E. Bradley, James W. Rowland, Robert L. Cochran, and C. H. Vanschaick. The officers chosen were: James Bennett, president; Marcus Hulings, vice-president; and James W. Rowland, cashier.

The Emlenton Bank was nationalized as the First National Bank of Emlenton, Pennsylvania, August 3, 1891, with a paid in capital of \$50,000. On June 28, 1902, capital increased to \$100,000, and later, January 11, 1928, increased to \$150,000.

During the next sixty-nine years of this bank's history, in addition to the names of the parties herein given, many people have been identified with this bank, either as shareholder or director, some of whom are: J. J. Gosser, C. E. Crawford, George W. Crawford, S. W. Phillips, Harry Heasley, T. B. Gregory, and Elmer S. Sloan.

The present (1942) officers and directors holding office are: H. J. Crawford, president; H. B. Mitchell, vice-president; H. M. Lynn, cashier; C. C. King and E. M. Smith, assistant cashiers. Directors: H. J. Crawford, H. R. Gilmore, H. B. Mitchell, George E. Long, and H. M. Lynn.

Bank statement of April 4, 1942: Capital, \$150,000; surplus and profits, \$478,801.09; commercial deposits, \$1,616,731.64; time deposits, \$1,695,027.22; total resources, \$3,940,559.95.

Emlenton—The Farmers National Bank was organized on May 16, 1900, with James Bennett as president. In 1908 the bank was reorganized and John A. Weller was elected president, serving as such until his death on June 21, 1940. G. I. Hughes was elected to fill the vacancy caused by Mr. Weller's death and is serving as president at the present time. The bank is a member of the Federal Reserve Bank and the Federal Deposit Insurance Corporation. Officers of the bank are: G. I. Hughes, president; H. T. Jolly, vice-president; Edgar S. Hugus, cashier; Alice L. McLaughlin, assistant cashier; John A. Cope, bookkeeper. Directors of the bank are: G. I. Hughes, H. T. Jolly, Edgar S. Hugus, L. E. Hughes and Ralph

V. Freeman. As of June 30, 1942, the capital is \$50,000; surplus, \$60,000; undivided profits—net, \$22,231.21; demand deposits, \$198,106.95; time deposits, \$364,820.12; total resources, \$695,440.28.

Oil City—Oil City Trust Company of Oil City, Venango County, was organized as a partnership in November, 1871. It started with a capital of \$90,000, with the following officers: George V. Forman, president; Henry L. Davis, cashier. Directors: George V. Forman, J. J. Vandergrift, J. J. Lawrence, O. B. Goodwin, Jr., Peter Schreiber, Charles F. Thomas, J. R. Campbell, and Henry L. Davis. Mr. Davis moved to Philadelphia in 1873, and Mr. Forman to Oil City in 1880, so that the officers at this time became: J. J. Vandergrift, president; W. J. Young, vice-president; George H. Moorhead, cashier; and Charles M. Loomis, teller. In 1883 the institution was reorganized as a State bank with a capital of \$150,000; surplus, \$14,000; deposits, \$118,000. W. J. Young was president from 1881 to 1892, when he was succeeded by Joseph Seep. The bank was reorganized as a trust company in 1903, and since that time its presidents have been: Joseph Seep, 1892-1920; H. R. Merritt, 1920-26; Frederick Fair, 1926-42; and since 1942, A. E. Mackintosh.

In 1942 the capital was \$300,000; surplus, \$3,000,000; undivided profits, \$500,000; reserves, \$883,000; total, \$4,683,000; trust funds, \$14,223,000.

In 1942 the officers were: A. E. Mackintosh, president; Arthur K. Heller, vice-president; Charles L. Suhr, vice-president; G. M. Friedhaber, secretary and treasurer; A. D. Barnes, assistant secretary and assistant treasurer.

Warren—The Warren Bank & Trust Company of Warren, Warren County, was chartered January 17, 1934.

The bank statement as of December 31, 1941, is as follows: Capital, \$300,000; surplus, \$265,000; undivided profits, \$116,908.46; deposits, \$3,624,001.97; total resources, \$4,435,719.92; total trust department resources, \$3,891,591.90, as of above date.

The officers of the Warren Bank & Trust Company as of December 31, 1941, are: W. W. Beaty, president; F. B. Jackson, H. A. Logan, M. H. Deardorff, and C. B. Ayers, vice-presidents; H. N. Elmquist, cashier; R. W. Steber, trust officer; P. E. Harrington, assistant cashier and secretary; G. B. Hultberg and E. D. Bartlett, assistant cashiers; G. G. Lind, assistant secretary and assistant cashier. Directors: H. L. Banghart, W. W. Beaty, O. S. Brown,

W. F. Clinger, M. H. Deardorff, A. W. Goal, F. B. Jackson, H. A. Logan, and R. W. Steber.

Tidioute—Tidioute State Bank, Tidioute, Warren County. In the days of Abraham Lincoln and the Civil War, oil was discovered in the Tidioute area, which later turned this hamlet into a boom town and caused the beginning of private and, in the 1870-80s, of savings, banks. Without any suggestion that the Tidioute State Bank traces its ancestry to any of these pioneer institutions, it is the successor to the Tidioute Savings Bank, a privately operated concern, which was purchased by Freeman E. Hertz, of Warren, Pennsylvania, and others, from the Livingston L. Hunter estate. The purchase and the adoption of the present title was December 29, 1914. Freeman E. Hertz acted as president of the bank until his death in February of 1941. The 1942 officers of the bank are: Lyle R. Briggs, president; A. V. Clinger, vice-president; Sarah E. Atkins, cashier. The 1942 directors are: A. V. Clinger, W. C. Tompsett, E. O. Pequignot, S. D. Blackman, and Lyle R. Briggs. As of December, 1941: Capital, \$50,000; surplus, \$50,000; undivided profits and/or reserves, \$19,000; deposits, \$699,000; total resources, \$818,000.

Albion—Albion State Bank of Albion, Erie County, established in 1925. Capital, \$50,000; surplus, \$5,000; undivided profits and/or reserves, \$5,000; deposits, \$463,000; total resources, \$520,000. Officers: H. L. Sawdey, president; George J. Biebel, vice-president; George R. McIntosh, cashier; Anna K. Hochadel, assistant cashier. Directors: H. L. Sawdey, W. R. Sawdey, G. R. McIntosh, W. O. Loomis, and G. J. Biebel.

Albion—First National Bank at Albion, Erie County, established in 1933. Capital, \$50,000; surplus, \$10,000; undivided profits and/or reserves, \$7,000; deposits, \$534,000; total resources, \$601,000. Officers: C. T. Bryan, president; L. R. Umburn, vice-president; C. C. Ringler, cashier; E. J. L. Anderson, assistant cashier. Directors: C. T. Bryan, L. R. Umburn, Charles C. Ringler, W. R. Harris, and C. L. Blair.

Big Run—Citizens National Bank, Big Run, Jefferson County, established in 1900. Capital, \$35,000; surplus, \$50,000; undivided profits and/or reserves, \$19,000; deposits, \$682,000; total resources, \$786,000. Officers: J. J. McClure, chairman of the board and president; B. W. Irvin, vice-president; G. C. Bowers, cashier and secre-

tary; C. W. Raybuck, assistant cashier. Directors: W. P. Irvin, B. W. Irvin, J. L. Kuntz, Irvin C. North, G. C. Bowers, W. C. Newcome, J. M. McClure, and John R. London.

Bradford—Citizens National Bank of Bradford, McKean County, established in 1936. Capital, \$200,000; surplus, \$200,000; undivided profits and/or reserves, \$90,000; deposits, \$4,667,000; total resources, \$5,160,000. The trust department resources, \$2,037,000. Officers: Sterns Marshall, president; F. D. Korner, vice-president; H. R. Sloan, cashier; J. J. McDowell, trust officer; Eugene S. Fry, assistant cashier; Carrie Natello, assistant trust officer. Directors: E. M. Daly, P. C. Duke, J. W. Bryner, F. D. Korner, S. Marshall, C. H. Olmsted, and J. J. McDowell.

Bradford—Producers Bank & Trust Company, Bradford, McKean County, established in 1926. Capital, \$200,000; surplus, \$77,000; undivided profits and/or reserves, \$148,000; deposits, \$4,481,000; total resources, \$4,912,000. Officers: J. M. Brooder, president; A. Stover, chairman of the board; W. F. Grow and M. F. Shay, vice-presidents; R. E. Johnson, secretary and treasurer; I. R. Dickinson, assistant secretary and assistant trust officer; F. M. Nash, trust officer; K. L. Hamilton, assistant trust officer. Directors: W. F. Grow, J. M. Brooder, M. F. Shay, J. R. Case, F. M. Nash, A. Stover, R. E. Johnson, and W. H. Rockman.

Brookville—Brookville Bank & Trust Company, Brookville, Jefferson County, established in 1933, one of the large "country" banks of Pennsylvania. Capital, \$150,000; surplus, \$125,000; undivided profits and/or reserves, \$43,000; deposits, \$1,705,000; total resources, \$2,023,000. Officers: G. A. Getty, president; R. M. Matson and J. B. Porter, vice-presidents; W. C. Ferry, secretary and treasurer; D. H. Faust, assistant secretary; F. P. Verstine, assistant treasurer. Directors: B. W. Fetzer, J. B. Porter, W. N. Nolph, R. M. Matson, Jr., L. G. Brosius, G. C. Reitz, George A. Getty, R. C. Humphreys, and F. P. Verstine.

Brookville—National Bank of Brookville, Jefferson County, established in 1883. Capital, \$100,000; surplus, \$100,000; undivided profits and/or reserves, \$28,000; deposits, \$1,425,000; total resources, \$1,653,000. Officers: F. C. Deemer, president; W. W. Corbet, vice-president; L. V. Deemer, cashier; C. K. Hawthorne and J. V. Stewart, assistant cashiers. Directors: W. C. Corbet, F. C. Deemer, R. B. Truman, R. E. Brown, L. V. Deemer, H. H. Nolph.

Brockway—Brockway Citizens Bank, Brockway, Jefferson County, established in 1920. Capital, \$50,000; surplus, \$100,000; undivided profits and/or reserves, \$32,000; deposits, \$1,068,000; total resources, \$1,250,000. Officers: B. E. Taylor, president; C. C. Chittester, vice-president; J. D. MacLauchlan, vice-president and cashier; George M. Williams, assistant cashier. Directors: C. C. Chittester, L. M. Groves, B. E. Taylor, J. D. MacLauchlan, C. R. McCauley, R. H. Smith, and Edgar Smith.

Clarendon—Clarendon State Bank, Clarendon, Warren County, established in 1919. Capital, \$50,000; surplus, \$7,000; undivided profits and/or reserves, \$6,000; deposits, \$346,000; total resources, \$409,000. Officers: A. W. Goal, president; R. A. Simpson and S. G. Perry, vice-presidents; P. H. Potts, cashier and secretary; C. D. Blair, assistant cashier.

Clarion—Citizens Trust Company, Clarion, Clarion County, established in 1904. Capital, \$150,000; surplus, \$255,000; undivided profits and/or reserves, \$163,000; deposits, \$2,771,000; total resources, \$3,339,000. Officers: H. M. Hufnagel, chairman of the board and president; F. L. Crooks, vice-president; B. L. Bowman, treasurer; M. J. Baldwin, trust officer; C. C. Moore, secretary; L. M. Clark, assistant treasurer.

Clarion—First National Bank in Clarion, Clarion County, established in 1934. Capital, \$65,000; surplus, \$38,000; undivided profits and/or reserves, \$35,000; deposits, \$1,227,000; total resources, \$1,365,000. Officers: Perry Wile, president; Herbert R. Lander, vice-president; W. M. Moore, cashier and secretary of the board; J. M. Smathers and Reba K. Corbett, assistant cashiers.

Clearfield—Clearfield Trust Company, Clearfield, Clearfield County, established in 1902. Capital, \$200,000; surplus, \$300,000; undivided profits and/or reserves, \$191,000; deposits, \$3,605,000; total resources, \$4,300,000. Officers: P. T. Davis, president; W. W. Wrigley, vice-president; W. E. Brown, vice-president and trust officer; L. T. Gaulin, treasurer and assistant secretary; J. H. Bartley, secretary.

Coalport—First National Bank, Coalport, Clearfield County, established in 1903. Capital, \$50,000; surplus, \$36,000; undivided profits and/or reserves, \$3,000; deposits, \$694,000; total resources, \$810,000. Officers: A. L. Hegarty, president; W. W. Hegarty,

vice-president; D. S. Braucht, cashier; E. Cavanaugh, secretary; N. M. Williams, assistant cashier.

Cochranton—First National Bank, Cochranton, Crawford County, established in 1894. Capital, \$50,000; surplus, \$100,000; undivided profits and/or reserves, \$3,000; deposits, \$806,000; total resources, \$959,000. Officers: J. H. Allison, president; F. D. Patterson, cashier; L. J. Smock, assistant cashier.

Conneaut Lake—First National Bank at Conneaut Lake, Crawford County, established in 1934. Capital, \$38,000; surplus, \$28,000; undivided profits and/or reserves, \$18,000; deposits, \$629,000; total resources, \$725,000. Officers: Walter Griesbach, president; N. H. Harned, vice-president; S. W. Gehr, cashier; W. Bruce Fye, assistant cashier.

Conneautville—Farmers National Bank, Conneautville, Crawford County, established in 1934. Capital, \$29,000; surplus, \$7,000; undivided profits and/or reserves, \$2,000; deposits, \$410,000; total resources, \$474,000. Officers: H. C. Winslow, president; F. R. Knapp, vice-president; F. A. Heyl, cashier.

Corry—Citizens National Bank, Corry, Erie County, established in 1891. Capital, \$60,000; surplus, \$75,000; undivided profits and/or reserves, \$61,000; deposits, \$2,925,000; total resources, \$3,187,000. Officers: J. J. Desmond, president; G. W. Donaldson, vice-president; H. W. Parker, cashier; M. H. McCarthy and S. W. Sweet, assistant cashiers.

Corry—The National Bank of Corry, Corry, Erie County, established in 1892. Capital, \$50,000; surplus, \$70,000; undivided profits and/or reserves, \$12,000; deposits, \$1,688,000; total resources, \$1,895,000. Officers: H. H. Keppel, president; A. L. Foster, vice-president; Dan A. Depew, cashier; H. W. Powers, assistant cashier.

Curwensville—Curwensville National Bank, Curwensville, Clearfield County, established in 1904. Capital, \$100,000; surplus, \$25,000; undivided profits and/or reserves, \$4,000; deposits, \$521,000; total resources, \$675,000. Officers: H. B. Swoope, Jr., president; D. D. Miller, vice-president; James Mitchell, Jr., executive vice-president; Anthony Hile, cashier.

Curwensville—Curwensville State Bank, Curwensville, Clearfield County, established in 1924. Capital, \$50,000; surplus, \$33,000; undivided profits and/or reserves, \$16,000; deposits, \$388,000; total

resources, \$487,000. Officers: F. E. Daniels, president; H. G. Gates and C. O. Norris, vice-presidents; E. S. Spackman, cashier; Edith M. Davis, assistant cashier.

DuBois—Deposit National Bank, DuBois, Clearfield County, established in 1880. Capital, \$200,000; surplus, \$200,000; undivided profits and/or reserves, \$143,000; deposits, \$3,405,000; total resources, \$3,948,000. Officers: J. Q. Groves, president; B. B. McCreight, vice-president; F. L. Newmeyer, cashier; E. M. Oldknow, assistant trust officer; F. D. Osburn, assistant cashier and trust officer.

DuBois—DuBois National Bank, DuBois, Clearfield County, established in 1904. Capital, \$200,000; surplus, \$200,000; undivided profits and/or reserves, \$116,000; deposits, \$3,027,000; total resources, \$3,543,000. Officers: W. G. Brown, president; J. W. Schoch, vice-president and secretary; W. F. Lott, cashier and trust officer; J. S. Horner, Ross Wilson and Edythe Swanson, assistant cashiers.

DuBois—Union Banking & Trust Company, DuBois, Clearfield County, established in 1900. Capital, \$250,000; surplus, \$250,000; undivided profits and/or reserves, \$145,000; deposits, \$2,790,000; total resources, \$3,435,000. Trust department resources, \$756,000. Officers: B. E. Taylor, president; J. E. Movin, Fred Brown, and A. P. Way, vice-presidents; M. H. Hartzfeld, treasurer and trust officer; J. F. Sprankle, Jr., secretary; C. G. Schwem, assistant treasurer; D. B. Kiel, assistant treasurer.

East Brady—Peoples National Bank, East Brady, Clarion County, established in 1900. Capital, \$130,000; surplus, \$85,000; undivided profits and/or reserves, \$86,000; deposits, \$1,482,000; total resources, \$1,783,000. Officers: N. E. Graham, president; F. L. Ludwick and A. J. Harnack, vice-presidents; J. H. McClaine, cashier.

Edinboro—First National Bank, Edinboro, Erie County, established in 1904. Capital, \$25,000; surplus, \$25,000; undivided profits and/or reserves, \$12,000; deposits, \$491,000; total resources, \$553,000. Officers: G. W. Minium, president; H. A. Ghering, vice-president; E. P. Campbell, cashier; Asa I. Skelton, assistant cashier.

Eldred—First National Bank, Eldred, McKean County, established in 1909. Capital, \$100,000; surplus, \$100,000; undivided

profits and/or reserves, \$41,000; deposits, \$1,776,000; total resources, \$2,017,000. Officers: E. E. Drake, president; G. T. Holmes, vice-president; G. I. Segling, cashier; Mary A. Kleisath, assistant cashier.

Erie—Security Peoples Trust Company, city of Erie, Erie County, established in 1903. Capital, \$1,007,350; surplus, \$227,000; undivided profits and/or reserves, \$312,000; deposits, \$21,142,000; total resources, \$22,738,000. Trust department resources, \$8,660,000. Officers: S. E. Nichols, president; J. G. Becht, A. M. Doll, and A. P. Quay, vice-presidents; W. W. Smith, treasurer; W. M. Wakefield, secretary; W. H. Erwin, trust officer; W. A. Williams, assistant secretary and assistant treasurer; L. W. Enslin, assistant treasurer; L. P. Burg, assistant secretary; C. E. Greenlund, assistant treasurer; W. J. Schraeder, assistant secretary; J. R. Smith, assistant treasurer.

Falls Creek—First National Bank, Falls Creek, Jefferson County, established in 1902. Capital, \$50,000; surplus, \$50,000; undivided profits and/or reserves, \$10,000; deposits, \$413,000; total resources, \$523,000. Officers: J. J. Sterrett, president; J. C. Booher, vice-president; J. C. Dennison, cashier; Gertrude S. Null, assistant cashier.

Farrell—S. J. Gully Bank, Farrell, Mercer County, established in 1904. Capital, \$100,000; surplus, \$75,000; undivided profits and/or reserves, \$32,000; deposits, \$1,506,000; total resources, \$1,713,000. Officers: S. J. Gully, president; Guy Gully, vice-president and cashier.

Franklin—Exchange Bank & Trust Company, Franklin, Venango County, established in 1888. Capital, \$200,000; surplus, \$400,000; undivided profits and/or reserves, \$224,000; deposits, \$9,873,000; total resources, \$10,697,000. Trust funds, \$4,582,000. Officers: T. L. Nesbit, president; G. E. Glines, vice-president; R. D. Nicklin, second vice-president; John Harper, secretary and treasurer; L. H. Wright, assistant secretary and assistant treasurer; H. H. Davison, assistant secretary and assistant treasurer.

Fredonia—Fredonia National Bank, Fredonia, Mercer County, established in 1933. Capital, \$33,000; surplus, \$10,000; undivided profits and/or reserves, \$11,000; deposits, \$429,000; total resources, \$500,000. Officers: H. C. Hays, president; J. A. Brown, vice-president; P. T. Paxton, cashier.

Fryburg—First National Bank, Fryburg, Clarion County, established in 1909. Capital, \$25,000; surplus, \$65,000; undivided profits and/or reserves, \$19,000; deposits, \$938,000; total resources, \$1,047,000. Officers: H. C. Faller, president; H. M. Amsler, vice-president; G. A. Ditz, cashier; J. E. Hargenrader, assistant cashier.

Girard—Girard National Bank, Girard, Erie County, established in 1934. Capital, \$50,000; surplus, \$38,000; undivided profits and/or reserves, \$5,000; deposits, \$686,000; total resources, \$779,000. Officers: E. J. Gunnison, president; J. T. O'Leary, vice-president; C. M. Drury, cashier.

Greenville—Farmers & Merchants Trust Company, Greenville, Mercer County, established in 1902. Capital, \$200,000; surplus, \$115,000; undivided profits and/or reserves, \$57,000; deposits, \$2,402,000; total resources, \$2,774,000. Trust funds, \$377,000. Officers: E. A. Baughman, president; J. F. Christman, vice-president; M. M. McClure, treasurer; E. M. Rowley, assistant treasurer; J. S. Walker, secretary and trust officer.

Greenville—Greenville National Bank, Greenville, Mercer County, established in 1875. Capital, \$135,000; surplus, \$135,000; undivided profits and/or reserves, \$56,000; deposits, \$2,552,000; total resources, \$2,878,000. Officers: T. R. Thorne, president; L. Henlein, vice-president; N. E. Peters, cashier; R. G. Love and J. H. Frampton, assistant cashiers.

Grove City—Grove City National Bank, Grove City, Mercer County, established in 1900. Capital, \$125,000; surplus, \$125,000; undivided profits and/or reserves, \$109,000; deposits, \$3,160,000; total resources, \$3,519,000. Trust department resources, \$714,000.

Houtzdale—Houtzdale Trust Company, Houtzdale, Clearfield County, established in 1918. Capital, \$125,000; surplus, \$42,000; undivided profits and/or reserves, \$25,000; deposits, \$1,212,000; total resources, \$1,404,000. Officers: J. M. Kinney, president; T. V. Gould and G. B. Rickenbaugh, vice-presidents; E. P. Spencer, secretary, treasurer and trust officer.

Johnsonburg—Johnsonburg National Bank, Johnsonburg, Elk County, established in 1891. Capital, \$150,000; surplus, \$150,000; undivided profits and/or reserves, \$116,000; deposits, \$1,710,000; total resources, \$2,126,000. Officers: V. M. Stouck, president; R. N. Jones and H. S. Oliver, vice-presidents; M. R. Gardner, cashier; J. J. Bliskey, assistant cashier.

Kane—First National Bank, Kane, McKean County, established in 1895. Capital, \$250,000; surplus, \$51,000; undivided profits and/or reserves, \$13,000; deposits, \$1,906,000; total resources, \$2,228,000. Officers: W. L. Heim, president; J. E. Calderwood and J. H. Heim, vice-presidents; O. H. Johnson, cashier; A. C. Cooke, assistant cashier.

Kersey—Farmers & Merchants Bank, Kersey, Elk County, established in 1903, is a branch of the Farmers and Merchants Bank of St. Marys. V. T. Enz serves as cashier and manager.

Knox—Clarion County National Bank, Knox, Clarion County, was established in 1877. Capital, \$125,000; surplus (including undivided profits) \$187,000; deposits, \$1,778,000; total resources, \$2,159,000. Trust department resources, \$1,075,000. Officers: J. C. Berlin, president; George R. Berlin, vice-president; George R. Berlin, cashier; W. H. Berlin, assistant trust officer; E. Jay Miller, assistant cashier; C. R. Wile, trust officer.

Madera—Madera National Bank, Madera, Clearfield County, established in 1904. Capital, \$50,000; surplus, \$50,000; undivided profits and/or reserves, \$4,000; deposits, \$438,000; total resources, \$557,000. Officers: Clark Hileman, president; A. W. Stoker, vice-president; V. E. Shoff, cashier; A. W. Stoker, assistant cashier and secretary.

Marienville—Gold Standard National Bank, Marienville, Forest County, established in 1901. Capital, \$50,000; surplus, \$32,000; undivided profits and/or reserves, \$4,000; deposits, \$384,000; total resources, \$470,000. Officers: C. M. Chipps, chairman of the board and president; E. O. Burcher, vice-president; R. H. Pickens, cashier and secretary; Mabel Burcher, assistant cashier.

Meadville—Crawford County Trust Company, Meadville, Crawford County, established in 1900. Capital, \$276,000; surplus, \$73,000; undivided profits and/or reserves, \$54,000; deposits, \$3,900,000; total resources, \$4,313,000. Officers: E. W. McGill, president; C. C. Johnston, vice-president; J. J. Farnicorn, treasurer; L. C. Beatty, assistant treasurer and trust officer; E. H. Dilley, secretary; M. D. Nichols, assistant secretary.

Meadville—First National Bank, Meadville, Crawford County, was established in 1894. Capital, \$300,000; surplus, \$150,000; undivided profits and/or reserves, \$72,000; deposits, \$3,971,000; total resources, \$4,509,000. Trust fund, \$2,466,000. Officers: H. M. Dickson, president; H. C. Winslow, vice-president; C. J. Miller,

cashier and trust officer; Kathryn M. Snearline, assistant trust officer; J. W. Hunter, F. C. Hunter, and G. L. Headrick, assistant cashiers.

Mercer—Farmers National Bank, Mercer, Mercer County, established in 1933. Capital, \$50,000; surplus, \$12,000; undivided profits and/or reserves, \$30,000; deposits, \$1,037,000; total resources, \$1,129,000. Officers: H. G. McClellan, president; C. L. Howe, vice-president; P. C. Anderson, cashier.

New Bethlehem—New Bethlehem Bank, New Bethlehem, Clarion County, was established in 1895. Capital, \$100,000; surplus, \$51,000; undivided profits and/or reserves, \$25,000; deposits, \$875,000; total resources, \$1,051,000. Officers: R. R. Anderson, president; A. L. Fleming and C. M. Lower, vice-presidents; George W. Yohe, vice-president and cashier; S. C. Stover, Jr., assistant cashier and secretary.

North East—First National Bank, North East, Erie County, was established in 1893. Capital, \$200,000; surplus, \$40,000; undivided profits and/or reserves, \$41,000; deposits, \$1,444,000; total resources, \$1,725,000. Officers: N. P. Fuller, president; J. E. Motier, chairman; J. B. Stull, vice-president; Fred St. Clair, cashier; Marie F. Gorndt, assistant cashier.

Oil City—Citizens Banking Company, Oil City, Venango County, established in 1902. Capital, \$102,000; surplus, \$78,000; undivided profits and/or reserves, \$77,000; deposits, \$1,509,000; total resources, \$1,766,000. Officers: Earle C. McFate, president; H. H. James, vice-president; H. D. Clark, cashier; J. L. Vaughn and G. H. Barber, assistant cashiers.

Oil City—First National Bank, Oil City, Venango County, established in 1863. Capital, \$125,000; surplus, \$250,000; undivided profits and/or reserves, \$128,000; deposits, \$2,747,000; total resources, \$3,250,000. Trust department resources, \$367,000. Officers: E. C. Breene, president; P. C. Beers and J. K. Earp, vice-presidents; Lester Fry, cashier; A. J. McCuen, trust officer; P. S. Moran and C. G. Heasley, assistant cashiers.

Oil City—Oil City National Bank, Oil City, Venango County, was established in 1934. Capital, \$300,000; surplus, \$300,000; undivided profits and/or reserves, \$183,000; deposits, \$6,413,000; total resources, \$7,197,000. Officers: H. J. Crawford, chairman of the board and president; W. R. Reitz, vice-president; L. M. Campbell,

vice-president and trust officer; A. R. McGill, cashier; W. N. Faller, C. W. Carey, assistant cashiers; H. J. Fitch, assistant trust officer.

Osceola Mills—First National Bank of Osceola, Osceola Mills, Clearfield County, was established in 1902. Capital, \$144,000; surplus, \$11,000; undivided profits and/or reserves, \$6,000; deposits, \$720,000; total resources, \$881,000. Officers: E. C. Blandy, president; G. A. Ricketts, vice-president; E. A. Hall, cashier; W. H. Woodcock, assistant cashier.

Pleasantville—Citizens Bank, Pleasantville, Venango County, was established in 1920. Capital, \$40,000; surplus, \$38,000; undivided profits and/or reserves, \$8,000; deposits, \$523,000; total resources, \$744,000. Officers: F. A. Williams, president; R. J. Hopkins and Wilbour Scofield, vice-presidents; J. R. Kookogey, cashier; Elsie L. Swanson, assistant cashier.

Port Allegany—First National Bank, Port Allegany, McKean County, was established in 1888. Capital, \$125,000; surplus, \$125,000; undivided profits and/or reserves, \$90,000; deposits, \$2,008,000; total resources, \$2,350,000. Officers: W. H. Taylor, president; R. W. Jeutter, vice-president; F. S. Cook, cashier and assistant trust officer; C. B. Barrho, assistant cashier.

Punxsutawney—Farmers & Miners Trust Company, Punxsutawney, Jefferson County, was established in 1907. Capital, \$150,000; surplus, \$73,000; undivided profits and/or reserves, \$36,000; deposits, \$2,254,000; total resources, \$2,514,000. Trust department resources, \$276,000. Officers: J. G. Kelly, president; H. W. McQuown, vice-president; James Mackenzie, treasurer; J. B. Quinlisk, secretary; N. L. Boddorf, assistant secretary, assistant treasurer and trust officer.

Reynoldsville—The First National Bank of Reynoldsville, Jefferson County, was organized April 20, 1893, with the following board of directors: Camden Mitchell, president; Scott McClelland, vice-president; John H. Kaucher, cashier; George W. Fuller, Joseph Strauss, Dr. J. C. King, and J. B. Henderson, all prominent in the business and professional life of Jefferson County. Upon Mr. Mitchell's death in 1903, Scott McClelland and Dr. J. C. King were for brief periods heads of the bank, and on January 9, 1906, John H. Kaucher was elected president, a position he held until his death in January, 1930. His successor, and present head of the organization, is Andrew

Wheeler. The present board of directors consists of the following men: Andrew Wheeler, E. E. Deible, A. T. McClure, Charles A. Herpel, Walter C. Henry, W. E. Stormer and Charles S. Lord.

The original capitalization was \$50,000. In January, 1905, this was increased by subscription to \$75,000 and so remained until January 13, 1931, when the capital was increased to \$150,000 through conversion of surplus, and the issuance of two shares of stock for each one held. At the present time the capital stock consists solely



(Courtesy of "Jeffersonian Democrat," Brookville)

Looking East on Main Street, Reynoldsville

of common stock with a par value of \$150,000 and a surplus of \$100,000. Immediately following this change in capitalization, a trust department was organized and has since been operated as an integral part of the banking business.

In 1936 the First National bought the assets and banking home of the Peoples National Bank of Reynoldsville, and in April, 1939, after a complete modernization of the banking room and vault, moved into the quarters it now occupies, in appearance and equipment ranking with the best in the western end of the State.

Rimersburg—First National Bank, Rimersburg, Clarion County, was established in 1903. Capital, \$50,000; surplus, \$50,000; undivided profits and/or reserves, \$47,000; deposits, \$958,000; total resources, \$1,105,000. Officers: Eugene Woods, president; C. E.

Andrews, Jr., chairman of the board; E. H. Howard, vice-president and cashier; J. G. Atwell, assistant cashier.

Sandy Lake—Mercer County State Bank, Sandy Lake, Mercer County, was established in 1911. Capital, \$50,000; surplus, \$50,000; undivided profits and/or reserves, \$9,000; deposits, \$807,000; total resources, \$916,000. Officers: Lorenzo Craig, president; E. S. Smith, vice-president; L. C. Jewell, cashier and secretary.

Sharpsville—First National Bank, Sharpsville, Mercer County, established in 1898. Capital, \$100,000; surplus, \$100,000; undivided profits and/or reserves, \$26,000; deposits, \$2,062,000; total resources, \$2,288,000. Officers: J. R. Gemnill, president; Karl Smith, vice-president; T. F. Wickerham, cashier; D. R. Davis, assistant cashier.

Sheffield—Sheffield National Bank, Sheffield, Warren County, was established in 1902. Capital, \$80,000; surplus, \$65,000; undivided profits and/or reserves, \$36,000; deposits, \$997,000; total resources, \$1,182,000. Officers: C. R. McNeal, president; W. O. Skelton, vice-president; P. J. Finerty, cashier; D. C. Hoover, assistant cashier.

Shippenville—First National Bank, Shippenville, Clarion County, was established in 1905. Capital, \$25,000; surplus, \$55,000; undivided profits and/or reserves, \$12,000; deposits, \$675,000; total resources, \$768,000. Officers: John F. Metzger, president; R. L. R. Snyder, vice-president; H. H. Bittenbender, cashier; Irene Mahl, assistant cashier.

Sligo—Sligo National Bank, Sligo, Clarion County, was established in 1907. Capital, \$25,000; surplus, \$75,000; undivided profits and/or reserves, \$10,000; deposits, \$775,000; total resources, \$885,000. Officers: C. E. Andrews, Jr., chairman of the board; Eugene Woods, president; R. A. Callen, vice-president; W. C. Elliott, cashier; J. M. Howarth, assistant cashier.

Smethport—Grange National Bank of McKean County at Smethport, city of Smethport, McKean County, was established in 1907. Capital, \$135,000; surplus, \$6,000; undivided profits and/or reserves, \$15,000; deposits, \$834,000; total resources, \$990,000. Officers: E. A. Studholme, president; E. R. Gallup, vice-president; A. E. Quirk, cashier and secretary; J. W. Conner, assistant cashier.

Smethport—Hamlin Bank & Trust Company, Smethport, McKean County, was established by Henry Hamlin in 1863. Capital, \$200,000; surplus, \$300,000; undivided profits, \$65,323.86; deposits, \$3,069,756.34; total resources, \$3,671,758.58. Trust funds invested, \$555,345.65. Officers: Orlo J. Hamlin, president; Ralph E. Burdick, vice-president and treasurer; Guy McCoy, secretary and assistant treasurer; E. G. Potter, trust officer; Frank B. Fay, assistant trust officer; O. Albert Johnson, assistant secretary. Directors: Orlo J. Hamlin, Guy McCoy, Fred D. Gallup, Robert A. Digel, Frank B. Fay, O. Albert Johnson, and Ralph E. Burdick.

Stoneboro—First National Bank, Stoneboro, Mercer County, was established in 1903. Capital, \$25,000; surplus, \$50,000; undivided profits and/or reserves, \$16,000; deposits, \$930,000; total resources, \$1,021,000. Officers: F. N. Houser, president; A. M. Yeager, vice-president; H. D. Parker, cashier.

Sugargrove—Sugar Grove Savings Bank, Sugargrove, Warren County, was established in 1877. Capital, \$50,000; surplus, \$50,000; undivided profits and/or reserves, \$30,000; deposits, \$360,000; total resources, \$490,000. Officers: J. E. Pelton, president; R. J. Weld and J. M. Abbott, vice-presidents; R. B. Baldwin, cashier and secretary.

Summerville—Union National Bank, Summerville, Jefferson County, was established in 1903. Capital, \$50,000; surplus, \$23,000; undivided profits and/or reserves, \$10,000; deposits, \$295,000; total resources, \$378,000. Officers: J. L. Byerly, president; James Shofestall, vice-president; James D. Carrier, cashier; Jean A. Ewing, assistant cashier.

Sykesville—First National Bank in Sykesville, Sykesville, Jefferson County, was established in 1934. Capital, \$50,000; surplus, \$10,000; undivided profits and/or reserves, \$5,000; deposits, \$267,000; total resources, \$332,000. Officers: B. B. Weber, president; L. H. Read, vice-president; W. R. Semple, cashier; Ruth Sykes Wells, assistant cashier.

Titusville—Second National Bank, Titusville, Crawford County, was established in 1865. Capital, \$300,000; surplus, \$206,000; undivided profits and/or reserves, \$56,000; deposits, \$3,184,000; total resources, \$3,757,000. Trust department resources, \$701,000. Officers: Robert Hampton, Jr., president; W. J. Stephens, chairman

of the board; J. M. Bloss, vice-president; A. H. Anderson, cashier; G. E. Nagel, assistant cashier and trust officer; M. S. Cadwallader, Jr., and H. A. Morgan, assistant cashiers.

Townville—Townville State Bank, Townville, Crawford County, was established in 1922. Capital, \$50,000; surplus, \$3,000; undivided profits and/or reserves, \$10,000; deposits, \$239,000; total resources, \$302,000. Officers: C. C. Johnston, chairman of the board and president; C. A. Gundaker, vice-president; F. D. Kingsley, cashier and secretary; J. W. Mason, assistant cashier.

Union City—Home National Bank, Union City, Erie County, was established in 1907. Capital, \$50,000; surplus, \$21,000; undivided profits and/or reserves, \$20,000; deposits, \$790,000; total resources, \$881,000. Officers: L. D. Shreve, president; R. B. Mulkie, vice-president; F. J. Kamerer, cashier; W. A. Joslin, assistant cashier.

Union City—National Bank of Union City, Union City, Erie County, was established in 1934. Capital, \$100,000; surplus, \$60,000; undivided profits and/or reserves, \$46,000; deposits, \$915,000; total resources, \$1,314,000. Officers: P. D. Mullin, president; J. C. Cafisch, vice-president; P. L. Clark, cashier and secretary of the board; M. M. Rouse, assistant cashier.

Warren—First National Bank, Warren, Warren County, is the oldest bank in Warren County, established in 1864. Capital, \$200,000; surplus, \$30,000; undivided profits and/or reserves, \$65,000; deposits, \$3,481,000; total resources, \$3,778,000. Officers: J. A. Rockwell, president; William Muir, chairman of the board; M. F. Cowden and C. T. Conarro, vice-presidents; M. D. Paterson, cashier; L. A. Branch, assistant cashier.

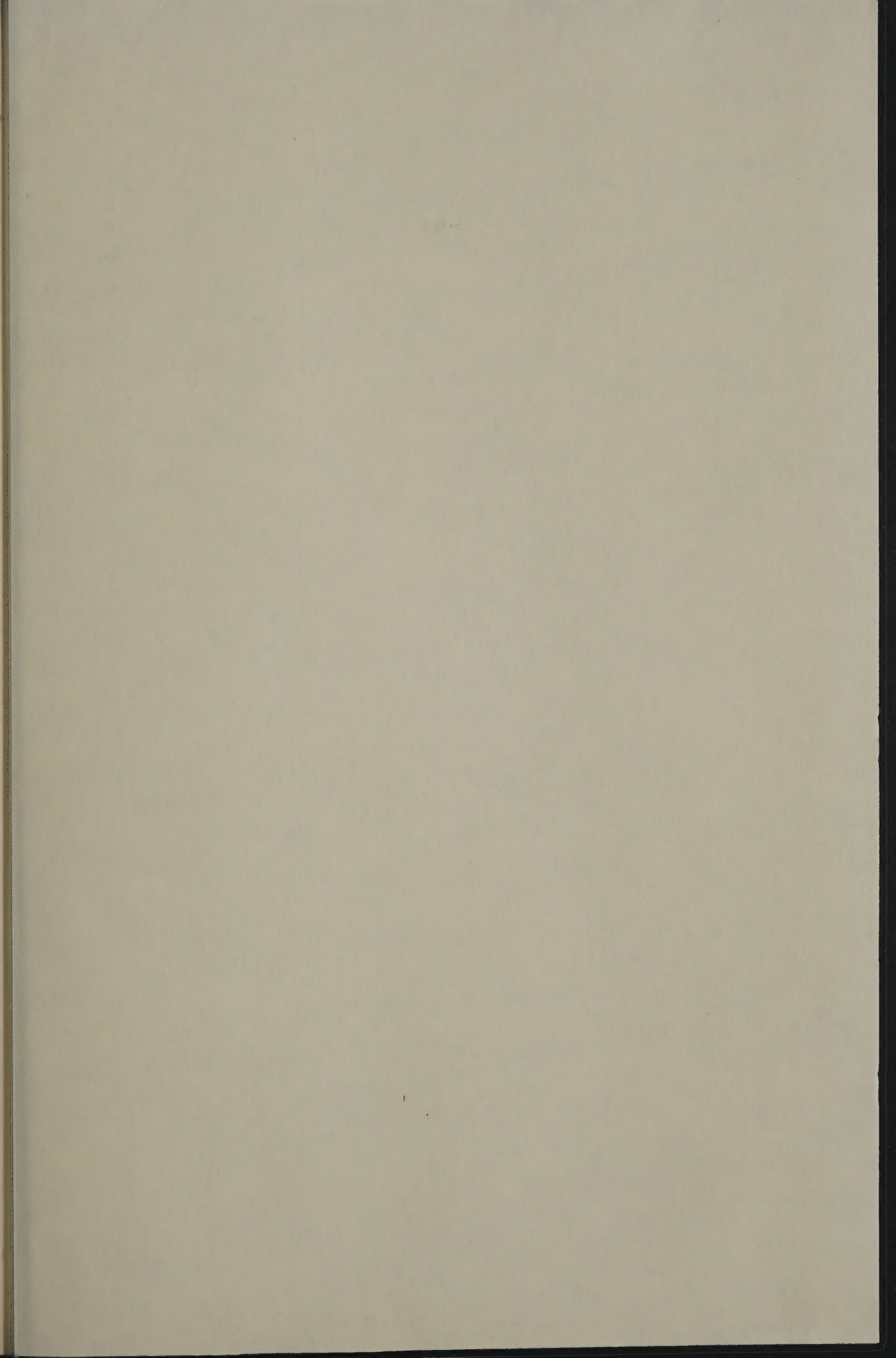
Warren—Warren National Bank, Warren, Warren County, was established in 1893, and ranks as one of the largest banks in this county. Capital, \$850,000; surplus, \$500,000; undivided profits and/or reserves, \$189,000; deposits, \$11,096,000; total resources, \$12,638,000. Trust department resources, \$4,248,000. Officers: E. W. Johnson, president; W. S. Clark and Clare J. Crary, vice-presidents; R. W. Mackay, cashier; P. E. Nelson, trust officer; G. E. Stone, assistant trust officer; E. M. Branch, H. B. Meacham, M. A. Connelly and Andrew Nelson, assistant cashiers.

Waterford—Ensworth National Bank, Waterford, Erie County, was established in 1911. Capital, \$25,000; surplus, \$13,000; undi-

vided profits and/or reserves, \$10,000; deposits, \$469,000; total resources, \$519,000. Officers: M. A. Patten, president; V. K. Worster, vice-president; A. C. Ensworth, cashier; Helen Thomas and Ethel A. Irvin, assistant cashiers.

West Middlesex—First National Bank, West Middlesex, Mercer County, was established in 1903. Capital, \$25,000; surplus, \$25,000; undivided profits and/or reserves, \$17,000; deposits, \$451,000; total resources, \$518,000. Officers: J. A. Hunter, president; E. E. Edeburn, vice-president and secretary; A. A. Young, cashier; E. E. Edeburn, assistant cashier.

Youngsville—The Youngsville National Bank, Youngsville, Warren County, was established in 1935. Capital, \$60,000; surplus, \$23,000; undivided profits and/or reserves, \$23,000; deposits, \$972,000; total resources, \$1,078,000. Officers: H. M. Kay, president; W. C. Kay, vice-president; F. H. Beckenbach, cashier; C. W. Spencer, assistant cashier and secretary.



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